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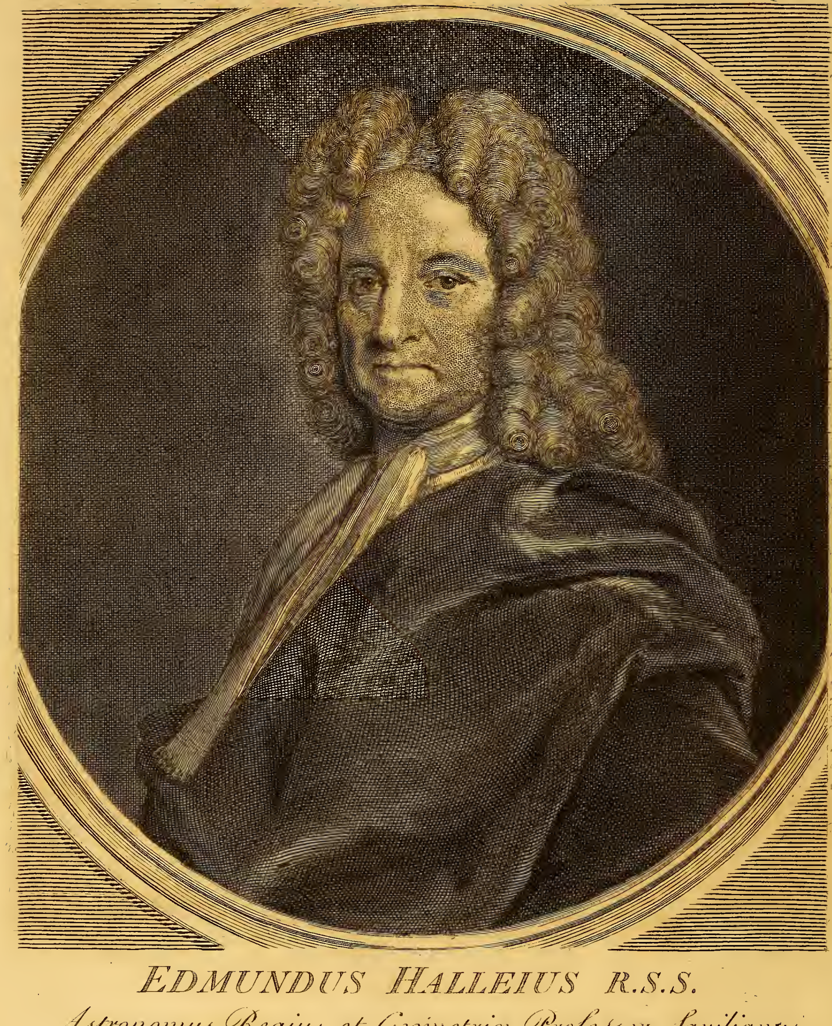

EDMUNDUS HALLEIUS R.S.S.

Astronomus Regius et Geometriæ Professor Savilianus.

EDMUNDI HALLEII

ASTRONOMI DUM VIVERET

REGII

TABULÆ ASTRONOMICÆ.

ACCEDUNT

DE USU TABULARUM PRÆCEPTA.

LONDINI
Apud GULIELMUM INNYS.
MDCCXLIX.

ADAMS 63.9

ASTRONOMICAL TABLES
WITH
PRECEPTS
BOTH IN
ENGLISH and LATIN
For computing the Places of the
SUN, MOON, PLANETS, and COMETS.

BY
EDMUND HALLEY, L. L. D.
Late Regius Profeſſor of ASTRONOMY at *Greenwich*.

LONDON,
Printed for WILLIAM INNYS in *Pater-noſter Row*.
MDCCLII.

GEORGE R.

GEORGE the Second, by the Grace of God, King of Great Britain, France, and Ireland, Defender of the Faith, &c. To all to whom theſe Preſents ſhall come, **Greeting:** Whereas Our Truſty and Wellbeloved WILLIAM INNYS, of Our City of London, Bookſeller, hath, by his Petition, humbly repreſented unto Us, That he hath, at great Charge and Expence, been more than thirty Years printing a Book of Aſtronomical Tables, compoſed and written by Doctor *Edmund Halley*, Our late Regius Profeſſor of Aſtronomy, and Savilian Profeſſor of Geometry, in Our Univerſity of Oxford, intituled, *Edmundi Halleii Aſtronomi dum viveret Regii Tabulæ Aſtronomicæ. Accedunt de Uſu Tabularum Præcepta:* And that the ſole Right and Title of the Copy of the ſaid Book, is veſted in him, the ſaid WILLIAM INNYS, wherefore he hath moſt humbly beſought Us to grant him Our Royal Privilege and Licence, for the ſole Printing and Publiſhing the ſame, for the Term of fourteen Years. We, being willing to give all due Encouragement to Works which may tend to the Advancement of Learning, are graciouſly pleaſed to gratify him in his Requeſt; and do, therefore, by theſe Preſents, ſo far as it may be agreeable to the Statute in that Behalf made and provided, for Us, Our Heirs, and Succeſſors, give and grant unto him, the ſaid WILLIAM INNYS, his Executors, Adminiſtrators, and Aſſigns, Our Royal Licence for the ſole Printing and Publiſhing the ſaid Book, for the Term of fourteen Years, to be computed from the Date hereof; Strictly forbidding all Our Subjects, within Our Kingdoms and Dominions, to reprint the ſame, either in the like or in any other Volume or Volumes whatſoever; or, to import, buy, vend, utter, or diſtribute, any Copies thereof, reprinted, beyond the Seas, during the aforeſaid Term of fourteen Years, without the Conſent or Approbation of the ſaid WILLIAM INNYS, his Heirs, Executors, and Aſſigns, by Writing under his, or their, Hands and Seals, firſt had and obtained for that Purpoſe, as They, and every of Them, offending herein, will anſwer the contrary at Their Peril; Whereof the Commiſſioners and other Officers of Our Cuſtoms, the Maſter, Wardens, and Company of Stationers, are to take Notice, That due Obedience may be rendered to Our Pleaſure herein declared.

Given at Our Court at Kenſington, the Eighth Day of Auguſt, 1749, in the Twenty-third Year of Our Reign.

By His Majeſty's Command,

HOLLIS NEWCASTLE.

PREFACE.

WE here offer to the Public the celebrated Dr. Halley*'s long expected Tables of the Sun and Planets, which were ſent to the Preſs in the year 1717, and printed off in 1719. There wanted only Precepts for uſing them, and ſome few Tables commonly inſerted in works of this kind, when in the year 1720 our Author being appointed Succeſſor to Mr.* Flamſteed *in the Royal Obſervatory, laid aſide the thoughts of publiſhing them ſo ſoon as he had intended, that he might compare the Lunar numbers with his own Obſervations, and thereby be enabled to publiſh a Table of their Errors at the ſame time. He had long earneſtly wiſhed to ſee ſomewhat of this kind done by others, that the quantities of ſuch Equations of the Moon as are already known, might be more exactly determined, and ſuch as are ſtill unknown, diſcovered. And relying on the uncommon vigour of his conſtitution he undertook this laborious work himſelf in the* 64*th year of his age, and beyond all expectation compleated it.*

When he firſt came to the Obſervatory he found it deſtitute of Inſtruments, for thoſe which Mr. Flamſteed *had uſed, being his own property were taken away by his Family: But in the year* 1721 *having fixed a Tranſit Inſtrument in the Meridian, he diligently obſerved the R. Aſcenſions of the Moon during the four following years, till the great Mural Quadrant was finiſhed and put up at the public expence in the year* 1725; *whereby he was enabled to determine her Longitudes from obſervation. Hence in the Tables entitled,* Lunæ Meridianæ &c. *we find the Moon's obſerved Longitudes compared with the Tables from* December 5, 1725, *to the end.*

Had our Author publiſhed theſe Tables himſelf, he would doubtleſs have given ſome account of the Obſervations he made uſe of for their conſtruction; and perhaps might have ſhewn how to correct them in ſome places from his later Obſervations. This is not to be expected from us. We ſhall only apprize the Reader of ſome particulars, the better to enable him to form a true judgment of them.

Our Author made uſe chiefly of Mr. Flamſteed*'s Obſervations, which though taken with great care, and moſt faithfully entered in his Books, yet there were too few of the Sun to determine the Solar numbers with ſufficient exactneſs: and Dr.* Halley *uſed frequently to complain of this deficiency. To this it is owing that he could not determine either the Species or Poſition of the Earth's Orbit exactly; much leſs could he diſcover any Equation to the motion of its Aphelion, or the other ſmall Equations by which its Orbit is affected: For theſe are not to be found out, nor their quantities deter-*

mined, but by a long ſeries of the niceſt Obſervations. To this we may add that neither the Aberration of the Light of the fixt Stars, nor the Equation to the Preceſſion of the Equinoctial points, nor that of the Nutation of the Earth's Axis were at that time known; for the diſcovery of all which the world is obliged to the wonderful ſkill, diligence, and ſagacity of our great Aſtronomer the Reverend Dr. Bradley, *F. R. S. Savilian Profeſſor of Aſtronomy in the Univerſity of* Oxford, *and our Author's moſt worthy Succeſſor in the Royal Obſervatory. Theſe Equations, though ſmall, are ſufficient to produce a ſenſible appearance of Error in good Obſervations, and had greatly perplexed Mr.* Flamſteed. *And as all Aſtronomy depends on a true knowledge of the Earth's motion in its Orbit, Errors in the Solar numbers cannot but produce Errors likewiſe in thoſe of the Planets.*

Such as are ſenſible of the almoſt infinite number of Obſervations which muſt be examined and compared to determine the Quantities of the Lunar Equations, will be the beſt judges of the pains our Author muſt have taken in conſtructing his Tables of the Moon, and of his ſkill and contrivance therein. With what candor he purpoſed to have imparted them to the Public is manifeſt in that he never intended to offer them as perfect, rather chuſing to omit ſome Equations for whoſe determination he wanted proper Obſervations, and at the ſame time reſolving to publiſh what Errors he ſhould find in them from his own Obſervations.

Our Author in finding the R. Aſcenſion of the Moon by obſervation, made uſe of the Britannic Catalogue for the places of the Fixt Stars, in which ſome of them are ill determined; and if we had any hopes that his Obſervations would ever be made public it might be worth the while to give a liſt of thoſe Stars, with the quantities of their Errors, that the obſerved places of the Moon deduced from them might be corrected.

We wiſh our Author had printed his Obſervations, for the publication of aſtronomical Obſervations is of very great importance as they never become obſolete like Tables, but on the contrary the uſefulneſs of ſuch as are carefully made and faithfully delivered is greatly encreaſed by their antiquity. It were therefore much to be wiſhed that the Obſervations made at the Royal Obſervatory, were printed off from time to time at the public expence; for the more diligent the Obſerver is, the more is the Public concerned in the preſervation of his Labours, and the leſs ſuitable is the expence to the circumſtances of a private Perſon.

In the year 1725 *Dr.* Halley *publiſhed ſome corrections of his Tables of* Mercury *in the Philoſophical Tranſactions* (N° 386) *where he determines*

the

the mean Longitude of that Planet at the commencement of the Julian *Year* 1723 *to be* ♐ 19. 09. 31; *and finds its mean Motion in* 100 Julian *Years* $2^{s}.\ 14^{\circ}.\ 2'.\ 13''$, *and the diſtance of its aſcending Node from the firſt Star of* Aries $0^{\circ}.\ 15'.\ 41''$.

Our Author received the Tables of Jupiter'*s Satellites from the Reverend Dr.* Bradley *in the year* 1718. *They do not anſwer to the Obſervations at this time, which was not unforeſeen by their learned Author, as appears by his Notes.*

The Synopſis of the Aſtronomy of Comets was printed off at the ſame time as the Tables.

The Tables entitled, Lunæ Meridianæ &c. *were ſent to the Preſs at different times as the Author deduced them from his Obſervations.*

We ſhall now inform the Reader what has been done in order to prepare this work for the Public.

There wanted convenient Tables of the mean Conjunctions of the Sun and Moon, a Table of Refractions, and another of the Longitudes and Latitudes of remarkable Places, all which we have inſerted in their proper order.

The Reverend Dr. Bradley *very kindly favoured us with the Tables of the mean Conjunctions of the Sun and Moon, and that of the Lunar Periods, which were conſtructed in a very commodious form by that excellent Aſtronomer the late Reverend Mr.* Pound. *The Table of Lunar Periods is of uſe in finding the returns of Eclipſes, and therefore we have omitted Dr.* Halley'*s Table of the Eclipſes which had happened in* 223 *Lunations from the year* 1701 *to* 1718 *with Equations which he had made for that purpoſe and called* [a] *the* Plinian *Period, both becauſe it is leſs accurate and after a few Periods elapſed becomes of little uſe. The Table of Refractions is the ſame our Author always uſed. The Places inſerted in the Table of Longitudes and Latitudes are chiefly ſuch as are remarkable either for antient Eclipſes or modern Obſervations: We wiſh the Obſervations from which the greater part of them are deduced were more to be depended on. We have retained the Elevation of the Pole at the Royal Obſervatory which Mr.* Flamſteed *and Dr.* Halley *uſed in their calculations, though it is ſomewhat too ſmall.*

In the Precepts we have ſtrictly adhered to the method Dr. Halley *obſerved in computing the Place of the Moon, that the Errors of computation might not differ from thoſe in the Tables entitled,* Lunæ Meridianæ &c. *For if the fourth Equation of the Moon be uſed after that of the*

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[a] See *Phil.* Tranſ. N° 194. p. 535.

*Center, or that rough correction of the argument of the fourth Equation directed in the Margin of the laſt page of Sheet (*b,*) be neglected, the difference of Error may ſometimes amount to half a Minute, which would make the Errors found in the Table of leſs uſe in correcting the computed Places.*

And here it is proper to inform the Reader, that it appears from Dr. Halley*'s Papers, that both in computing the R. Aſcenſion of the Moon's Limb, and in finding the Longitude of her Center from Obſervation, he conſtantly uſed the apparent inſtead of the true Semidiameter of the Moon; and conſequently from the beginning of the Table* Lunæ Meridianæ &c. *to the latter end of the year* 1725 *from the New to the Full Moons, while the Weſtern Limb was obſerved, the computed R. Aſcenſions of that Limb are ſet down too backward; and during the remainder of the Month while the Eaſtern Limb was obſerved, the computed R. Aſcenſions of that Limb are ſet down too forward: And from the year* 1725 *the Longitudes of the Moon's Center deduced from the obſervations of her Weſtern Limb are ſet down too forward, and thoſe from the obſervations of her Eaſtern Limb too backward. This Error is not conſiderable, and ſeldom exceeds a quarter of a Minute, therefore in common caſes it may be neglected, for which reaſon we have taken no notice of it in the Precepts: But if any one ſhall undertake to correct the Moon's mean Motion, or to new model the Equations, it will be neceſſary to correct the Errors found in the Table by the Exceſs of the Moon's apparent Semidiameter in R. Aſcenſion or Longitude, above her horizontal Semidiameter of the like denomination.*

We have endeavoured to be as conciſe in the Precepts as poſſible, but for the ſake of Mariners, have explained the method of finding the Longitude at Sea from Obſervations of the Moon, by ſeveral Examples.

ADVERTISEMENT.

The Author of the *Latin* Precepts having been deſired to reviſe this Tranſlation of them, hath thought fit to make ſome alterations and additions.

He deſires the Reader will pleaſe to correct the following Errors in the *Latin*, which eſcaped his notice while it was printing off.

Corrigenda in Præceptis Latinis.

P. (b) 2. l. 22. *pro* 5. 24. 4. 40. *lege*, 5. 24. 4. 59. *ibid.* l. 26. *pro* diſtantia ☽ à ☉, *lege*, differentiâ. p. (c) l. 10. *dele*, maximæ. *ibid.* l. 15. *dele*, maximæ, *ibid.* l. 26. 27. *verba*, Tabulâ——ad diſtantiam Lunæ a Syzygiâ propiore, *litteris Romanis erant exprimenda.* p. (d) 4. l. 4. *pro* 5. 59. 47. *lege*, 4. 59, 47. p. (e) 1. l. 23. *pro* γ *lege* β. p. (e) 2. l. 26. *dele*, Orbitæ. p. (e) 3. l. 9. *dele* Orbitæ. p. (Q q 2) Aph. ☿ *pro* ♐ 12. *lege* ♐ 13. *ibid.* Nod. ☿ *pro* ♉ 14. *lege* ♉ 15.

Precepts for uſing the Tables.

NOTE I.

Of aſtronomical Time.

APPARENT time is reckoned from the paſſage of the Sun's Center over the Meridian of any Place to its return to the ſame; for in that interval of time is one natural day compleated. But theſe days being unequal to each other, the mean or equal motions of the Sun and Planets cannot well be adapted to them; therefore Aſtronomers have ſuppoſed a mean day, to the noon of which they ſet down the mean Places. This, in the following Precepts, we ſhall call the Mean Noon. If then, the Place of the Sun or a Planet be ſought, for any given inſtant of apparent time, the mean time anſwering thereto muſt be found by the Tables of the Equations of Time (C c 3) and the mean place of the Sun or Planet muſt be ſought to that mean time.

NOTE II.

Of the Tables of Epochs.

The mean Places of the Sun and Planets in the Tables of Epochs are to the Mean Noon of the laſt day of the preceding *Julian* year. Thus the Sun's Mean Anomaly in the Table of Epochs anſwering to the year 1722, is his Mean Anomaly to that fictitious Noon on *December* 31, 1721. The Tables are adapted to the Time of the Meridian of the Royal Obſervatory at *Greenwich*.

PRECEPTS FOR COMPUTING THE PLACE OF THE SUN.

To find the Sun's true Longitude for any given time.

1. From the Tables entitled, *Epochæ mediorum motuum Solis & primæ Stellæ Arietis*, (D d &c.) and *Motus Anomaliæ mediæ Solis &c.* (D d 3 &c.) collect the Sun's Mean Anomaly and the place of his Apogee for the given year, day, and time of the day.

2. The

2. To the Sun's mean Anomaly for the given time add the Longitude of his Apogee, the Sum will be the Sun's Mean Longitude.

3. In *Tabula Æquationum Solis* (E e 3) find the Equation correſponding to the Sun's Mean Anomaly, which according to its Title being added to, or ſubtracted from, the Sun's Mean Longitude, will give his true Longitude to the mean time of the Tables.

4. If the given Time be apparent, ſeek the Equation correſponding to the Sun's true Longitude in the firſt of the Tables entitled, *Tabulæ Æquationis Temporis*, (C c 3) and that correſponding to his mean Anomaly in the other Table in the ſame page. Their ſum, if both be to be added or ſubtracted; or their difference, if one be to be added and the other ſubtracted, will be the abſolute Equation of Time, by which the given apparent time muſt be encreaſed or diminiſhed to reduce it to Mean. And the Sun's true Longitude found over again to this mean time will be his true Longitude at the apparent time given. Or if the Sun's true Longitude firſt found be corrected by adding or ſubtracting an Arc of his mean Motion anſwering to the abſolute Equation of time, it will give his true Longitude for the apparent time very nearly.

Tabula Æquationis Temporis compoſitæ is a Table of the Abſolute Equation of Time anſwering to the Sun's true Longitude, but this Table is not perpetual on account of the Motion of the Sun's Apogee.

EXAMPLE.

Required the true Longitude of the Sun on the apparent Noon of the 20th of January, 1722.

In the Table *Epochæ mediorum motuum &c.* the Sun's Mean Anomaly to the Year 1722 is 6^{s}. 12°. 37′. 56″, and the place of his Apogee ♋ 8°. 0′. 24″, or 3^{s}. 8°. 0′. 24″. to theſe add the motion of his Mean Anomaly to *Jan.* 20, 0^{s}. 19°. 42′. 43″, and that of his Apogee (whoſe monthly motion is found at the bottom of each month) 3″, their ſums will be 7^{s}. 2°. 20′. 39″ the Sun's Mean Anomaly, and 3^{s}. 8°. 0′. 27″. the place of his Apogee on the Mean Noon of the 20th of *January* 1722. And theſe added together give 10^{s}. 10°. 21′. 6″ for the Sun's mean Longitude at that time. The Equation of the Center in *Tabula Æquationum Solis* to 7^{s}. 2° of Mean Anomaly is 1°. 2′. 47″, that to 7^{s}. 3° is 1°. 4′. 31″, their difference 1′. 44″; and as while the Sun's M. Anomaly encreaſes, the Equation encreaſes likewiſe, add 36″, the proportional part of this difference, to the leſſer Equation 1°. 2′. 47″, it will give 1°. 3′. 23″ for the Equation to the M. Anomaly 7^{s}. 2°. 20′. 39″, which added (as the Table directs) to the mean Longitude of the Sun gives ♒ 11°. 24′. 29″ the Sun's true Longitude to the mean Time of the Tables.

Seek now the Equation of Time, and that part of it which depends on the Sun's Place ♒ 11°. 24′ will be found 9 m. 52 s. and the other part anſwering to his M. Anomaly 7^{s}. 2°. 20′. 4 m. 13 s. which according to the Tables are both additive, therefore their ſum 14 m. 5 s. is the abſolute Equation of Time, which added to the apparent time given will convert it into Mean. Therefore to obtain the Sun's true Place to the given apparent time correctly, the computation ſhould be made over again to 14 m. 5 s. after the Mean Noon of the Tables. But if an Arc of 35″, which is the Sun's Mean Motion in 14 m. 5 s. be added to the true Longitude above found, it will become ♒ 11°. 25′. 4″. his true Longitude (very nearly) on the apparent Noon of *January* 20, 1722.

I The

The Form of the Calculation.

		☉ m. Anom.				☉ Apogee.			
		s	°	′	″	s	°	′	″
A. D.	1722	6	12	37	56	3	8	0	24
Jan.	20	0	19	42	43				3
		7	2	20	39	3	8	0	27
		3	8	0	27				

							m.	s.
☉ m. Long.	10	10	21	6				
Eq. of the Cent.	+	1	3	23	1ſt part of the Eq. of Time	+	9	52
					The other part — — —	+	4	13
	♒	11	24	29				
Correction for Eq. Time			+	35	Abſolute Equ. of Time —	+	14	5
	♒	11	25	4	☉ true Longitude *Jan.* 20, 1722, nearly.			

Having found the Sun's true Longitude, his Declination may be obtained from the Table entitled, *Tabula Declinationum punctorum Eclipticæ* (B b) and his R. Aſcenſion from *Tabula Aſcenſionum rectarum punctorum Eclipticæ* (B b 2 &c.)

PRECEPTS FOR THE TABLES OF THE MOON.

The Year and Month being given, to find the mean times of the Syzygies.

1. From the Tables *Epochæ mediarum Conjunctionum Lunæ cum Sole* (* E e &c.) and *Revolutiones Lunæ ad Solem in menſibus anni communis* (** E e) collect the days and parts of a day anſwering to the given Year and Month, and likewiſe the Sun's mean Anomaly, and the mean diſtances of the Sun from the Moon's Apogee and Node. In Leap Years ſubtract one from the number of days in the Months after *February.* If the Oppoſition be ſought, add half a Synodical Month (which, with the mean Motions anſwering thereto, is at the bottom of the Table of Months) to the Time of Conjunction found as above, and the Mean Motions for the half Month to the Mean Motions at the Conjunction.

2. From *Tabula Æquationum annuarum &c.* (L l 3 &c.) take out the Equations of the Moon's Apogee and Node anſwering to the Sun's mean Anomaly, which being applied, with contrary Signs to thoſe directed in the Tables, to the Sun's mean diſtances from the Moon's Apogee and Node, will give his diſtance from each once equated. Add to theſe, or ſubtract from them (according as the Table ſhall direct) the Equation of the Sun (found by the third Precept of the Sun) and the former will be the Annual Argument of the Moon; the latter, the true diſtance of the Sun from the Node once equated.

3. The mean diſtance of the Sun from the Moon's Apogee once equated, ſubtracted from the Sun's mean Anomaly, is the Argument of the fourth Equation of the Moon in the Conjunctions. But in the Oppoſitions, both this Argument and the Annual Argument muſt be encreaſed by ſix Signs.

4. In *Tabula Æquationum annuarum Lunæ* (L l 3 &c.) find the Moon's Annual Equation anſwering to the Sun's mean Anomaly. In the Table entitled *Æquatio ſemeſtris altera* (M m) find the third Equation of the Moon anſwering to the Sun's diſtance from the Node. In the Table *Æquatio Lunæ quarta* (ibid.) find the fourth Equation to its proper Argument. And laſtly in *Tabula Æquationum Lunæ in Syzygiis* (O o 3) find the Equation anſwering to the annual Argument. The ſum of theſe Equations whenever the true Syzygy happens at the ſame time with the Mean (which is but ſeldom) will be equal to the Equation of the Sun's Center. But when the

true

true Syzygy precedes the Mean, the ſum of theſe Equations will exceed that Equation: And when the Mean Syzygy precedes the true, the Sun's Equation will exceed the Sum of theſe Equations of the Moon. The difference therefore between this Sum and the Equation of the Sun, by means of the Table *Motus medii Lunæ à Sole (** E e 2)* will give the time between the Mean Syzygy and the true, very nearly.

EXAMPLE I.

Required the mean time of New Moon in July *in the year* 1684.

	Mean conjunc.	☉ me. Anom.	☉ from ☽ apog.	☉ from ☊		
	D h m s	s ° ′ ″	s ° ′ ″	s ° ′ ″		° ′ ″
1684.	6 13 22 38	6 18 57 15	9 19 6 8	6 0 25 39		
June, leap year.	25 4 24 18	5 24 37 56	5 4 54 3	6 4 1 24	1ſt Eq. ☽	+ 0 2 41
					3d	— 0 0 6
July	1 17 46 56	0 13 35 11	2 24 0 11	0 4 27 3	4th	— 0 2 16
Diff. ☉ Eq. ☽ Eq.	+ 8 54 6	− 2 24 4 47	+ 4 36	— 2 11	Æq. in ſyz.	— 4 58 24
☌ July	2 2 41 2	9 19 30 24	2 24 4 47	0 4 24 52	Sum	— 4 58 5
		Arg. 4th.Eq.	— 26 47	— 26 47	☉ Equation	— 0 26 47
			2 23 38 0	0 3 58 5	Diff.	4 31 18
			Annual Arg.	☉ fr. ☊	Hours 8 =	4 3 49
						27 29
					Min. 54 =	27 26
					Sec. 6 =	0 3

Therefore the mean time of Conjunction in the Month of July, A. D. 1684, was July 2, 2. h. 41. m.

EXAMPLE II.

Required the mean time of Full Moon in Auguſt *in the year* 1681.

	Mean conjunc.	☉ me. Anom.	☉ à ☽ Apog.	☉ à ☊		
	D h m s	s ° ′ ″	s ° ′ ″	s ° ′ ″		° ′ ″
1681.	8 22 12 45	6 22 3 19	1 23 52 52	4 5 37 4	1ſt Eq. ☽	+ 0 10 9
July	25 17 8 21	6 23 44 15	6 0 43 3	7 4 41 38	3d	+ 0 0 10
½ Syn. Mon.	14 18 22 2	0 14 33 10	0 12 54 30	0 15 20 7	4th	− 0 0 19
					Eq. in Syz.	− 4 40 41
Auguſt	18 9 43 8	2 0 20 44	8 7 30 25	11 25 38 49		
Diff. ☉ Eq. ☽ Eq.	+ 5 36	−8 7 47 37	+ 17 12	— 8 11	Sum	− 4 30 41
					☉ Equation	− 1 40 2
☍ Aug.	18 15 19	5 22 33 7	8 7 47 37	11 25 30 38		
		+6	— 1 40 2	— 1 40 2	Diff.	2 50 39
					Hours 5	= 2 32 23
		11 22 33 7	8 6 7 35	11 23 50 36	Min. 36	= 18 16
		Arg. 4th Eq.	Annual Arg.	☉ à ☊		
			+ 6			
			2 6 7 35			
			Arg. Equ. in Syz. ☍			

D h m
Therefore the Oppoſition happened Aug. 18 15 19 mean Time.

The Times thus found will differ ſomewhat from the truth, and are to be corrected by finding the true place of the Moon by the Anomaliſtic Tables *(F f &c.)* according to the Precepts following.

To find the true place of the Moon to any given mean Time of Conjunction or Oppoſition.

1. Find the Sun's true Longitude to the given time, and ſet down his Mean Anomaly to Thirds.

2. In the Tables *Epochæ mediorum motuum Lunæ exiſtente Terra in Aphelio*, (F f &c.) find the Mean Longitudes of the Moon, her Apogee, and Node to the time when the Earth was laſt in its Aphelion.

3. From the Tables entitled, *Medii motus Lunæ Apogæi & Nodorum ad gradus Anomaliæ mediæ Solis* (F f 4 and following) and *Medii motus Lunæ Apogæi & Nodorum ad minuta Anomaliæ mediæ Solis* (H h 2) take out the mean Motions of the Moon, her Apogee, and Node, anſwering to the Sun's Mean Anomaly: Add theſe motions of the Moon and Apogee to the former, and ſubduct that of the Node; and you will have the places of the Moon, Apogee and Node once equated.

4. The diſtance of the Sun from the Moon's Node once equated, is the Argument of the third Equation of the Moon entitled, *Æquatio ſemeſtris altera* (M m). The place of the Sun's Apogee, ſubtracted from the place of the Moon's Apogee, is the Argument of the fourth Equation, *Æquatio Quarta Lunæ* (ibid.) in the Conjunctions; but in the Oppoſitions this quantity muſt be encreaſed by the addition of ſix Signs. The Annual Argument in the Conjunctions, and the ſame encreaſed by ſix Signs in the Oppoſitions, is the Argument of *Tabula Æquationum Lunæ in Syzygiis* (O o 3). And by the proper application of theſe Equations the true place of the Moon in her Orbit will be obtained.

5. The place of the Node ſubtracted from the true place of the Sun, in the Conjunctions; but from its oppoſite, in the Oppoſitions, is called the Argument of Latitude in the Syzygies; to which the Latitude of the Moon, and the Reduction of her place in her Orbit to the Ecliptic, are found in *Tabula Latitudinaria Lunæ in Syzygiis* (O o 4).

6. If the given time be found to differ from that of the true Syzygy, it may be corrected by the Table *Motus horarii Lunæ à Sole* (* * E e 2).

EXAMPLE I.

Required the Moon's true place at the time of New Moon before found, A.D. 1684, July 2, 2 *h.* 41 *m. mean time, and thence the correct time of Conjunction.*

	☉ Mean Anom.	☉ Apogee
	s ° ′ ″ ‴	s ° ′ ″
1684	6 12 29 28 46	3 7 21 59
Biſſ. July 2	6 1 21 2 3	30
Hours 2	4 55 41	
Min. 41	1 41 1	
☉ M. Anom.	0 13 57 7 31	
☉ Apogee	3 7 22 29	
☉ M. long.	3 21 19 36	
☉ Equation	— 27 29	
☉ Long.	3 20 52 7	

	☽ mean long.	☽ Apogee	☽ ☊
	s ° ′ ″	s ° ′ ″	s ° ′ ″
1684	9 19 19 19	0 25 25 13	3 17 14 22
☉M. An. 13°	5 23 50 19	1 23 46	39 49
57′	12 42 2	6 27	3 4
7″	1 33		
31‴	7		
	3 25 53 20	0 26 55 26	3 16 31 29
3d Equ.	— 0 7	9 19 32 57	0 4 20 38
4th	— 2 16	Arg. 4th Equ.	☉ a ☊
Eq. in Syz.	— 4 58 28	2 23 56 41	° ′ ″
☽	3 20 52 29	Annual Arg.	0 22 47 N
☉	3 20 52 7		Lat. ☽.
Diſtance ☽ from ☉	0 0 0 22		

The Moon therefore had paſſed the Conjunction by an Arc of 22″, and the true Conjunction preceded the given time by about 44 ſeconds of an hour; (for in that ſpace of Time the Moon's mean motion from the Sun is 22″.) Therefore the true Conjunction was at 2 h. 40 m. 16 s. of mean time.

The abſolute Equation of Time was then 4 m. 58 s additive, ſubtract it therefore from the Mean Time here found, and we ſhall have 2 h. 35 m. 18 s for the apparent time of the New Moon.

EXAMPLE II.

Required, the Moon's true place at the time of Full Moon before found, A. D. 1681, Aug. 18, 15*h.* 19*m. mean time, and thence the correct time of Oppoſition.*

	☉ M. Anom.	☉ Apogee
	s ° ′ ″ ‴	s ° ′ ″
1681.	6 13 15 29 56	3 7 18 57
Aug. 18.	7 16 41 17 34	38
Hours 15.	36 57 36	
Min. 19.	46 49	3 7 19 35
☉ M. Anom.	2 0 34 31 55	
Apogee	3 7 19 35	
☉ M. Long.	5 7 54 7	
Equation	— 1 40 16	
☉ true Long.	5 6 13 51	
☽ Apogee	8 29 54 13	
	2 6 19 38	
	Annual Arg. in 8	

	☽ M. Long.	☽ Apogee	☽ ☊
	s ° ′ ″	s ° ′ ″	s ° ′ ″
1681	8 10 54 55	8 23 20 30	5 15 16 0
Signs 2.	2 22 18 8	6 29 48	3 5 16
Min. 34.	7 34 33	3 51	1 50
31″. 55‴.	7 7	4	2
	11 10 54 43	8 29 54 13	5 12 8 52
3d Equat.	+ 0 0 10	11 22 34 38	11 24 4 59
4th Eq.	— 0 0 19	Arg of 4thEq.	Arg. of 3d Eq.
Eq. in Syz.	— 4 41 2		5 24 4 59
			Arg. of Lat. in 8
☽	11 6 13 32		° ′ ″
☉	5 6 13 51		☽ Lat. 0 31 0 N.
Diſtance of ☽ from ☉	5 29 59 41		

Here the Moon is 19″ behind the Oppoſition, which her mean motion from the Sun will compleat in 38 ſeconds. Therefore the true Oppoſition was at 15 h. 19 m. 38 s of mean Time, nearly.

To find the mean time of the Syzygies to a given Year and Month before the Chriſtian Era.

1. In the Table *Epochæ mediarum Conjunctionum Lunæ cum Sole* (* E e &c.) find a Year of the 18th Century, which added to the given number of Years before Chriſt, diminiſhed by One, ſhall make a number of whole Centuries.

2. Seek this number of Centuries in the Table *Revolutiones Lunæ ad Solem in Annorum centuriis* (* * E e 3), and ſubtract the time, and Motions anſwering to it, from the Time and Motions anſwering to the Year of the 18th Century before found, and they will give the mean Time of the firſt mean Conjunction in the given Year before Chriſt, with the Motions anſwering thereto. Whence the time of Conjunction or Oppoſition in the given Month may be found by the Precepts already delivered.

If the Year of the 18th Century be a Leap Year, the given Year before Chriſt was likewiſe a Leap Year.

EXAMPLE.

Required the mean time of the Moon's Conjunction with the Sun, in the month of May, *in the year before Chriſt* 585.

The years 584
Added to 1716

Make 2300 or 23 whole Centuries.

		☉ me. Anom.	☉ à ☽ Apog.	☉ fr. ☊		
	D h m s	s ° ′ ″	s ° ′ ″	s ° ′ ″		
1716	12 16 6 46	6 24 41 0	2 12 33 1	2 25 57 37		
2300 ſubtr.	11 5 57 54	11 19 46 54	1 5 58 33	7 25 26 59		° ′ ″
	1 10 8 52	7 4 54 6	1 6 34 28	7 0 30 38	1ſt Eq. ☽	+ 0 0 5
May biſſex.	26 15 40 15	4 25 31 37	4 9 5 2	5 3 21 10	3d	— 0 0 6
					4th	— 0 0 37
	28 1 49 7	0 0 25 43	5 15 39 30	0 3 51 48	Equ. in Syz.	— 1 8 35
	+ 2 14 35	6 14 46 4	+ 9	— 4		
		Arg. 4th. Eq.	— 51	— 51	Sum	— 1 9 13
☌ May	28 4 3 42				☉ Equation	— 0 0 51
the mean time of			5 15 38 48	0 3 50 53		
Conjunction ſought.			Ann. Arg.	☉ à ☊		1 8 22
					Hours 2 =	1 0 57
					Min. 54. ſec. 35.	0 7 25

By a like method may the Moon's true place be found by the Anomaliſtic Tables; but while the other motions for the centuries of years are ſubtracted, the Longitude of the Node muſt be added to the radical Longitude for the year of the 18th century. As in the following example.

EXAMPLE.

Required the Moon's true place to the mean time found in the foregoing Example.

	☉ m. Anom.	☉ Apog.	☽ me. long.	☽ Apog.	☽ ☊	
	s ° ′ ″ ‴	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′ ″	
1716	6 12 11 41 41	3 7 54 20	7 8 59 37	8 7 35 37	6 28 17 2	
2300 ſubtr.	11 8 41 42 40	1 8 45 33	5 15 8 35	11 23 42 30	6 27 25 50	add.
	7 3 29 59 1	1 29 8 47	1 23 51 2	8 13 53 7	1 25 42 52	
May 28 Biſſ.	4 26 51 16 20	25				
Hours 4	9 51 22					
Min. 3. 42^s.	9 5	☉ Anom. 31′	6 54 26	3 30	1 40	
		15″ 48‴	3 31	2	1	
☉ M.Anom.	0 0 31 15 48					
☉ Apog.	1 29 9 12		2 0 48 59	8 13 56 39	1 25 41 11	
		3d Eq.	— 0 0 6	5 15 42 47		
☉ M. long.	1 29 40 28	4th	— 0 0 37	Ann. Arg.	☽ Apog.	8 13 56 39
☉ Eq.	— 1 2	Eq. in Syz.	— 1 8 15		☉^{s} Apog.	1 29 9 12
☉ Long.	1 29 39 26	☽	1 29 40 1			6 14 47 27
		☉	1 29 39 26			Arg. 4th Eq.
		Diſt. of ☽ from ☉	0 0 35			

Therefore the Moon being paſt the Conjunction by an arc of 35″; ſubtract 1^m. 9^s from the time before found, and there remains 4^h. 2^m. 33^s for the correct time of Conjunction ſought.

To

To find the Moon's Place for any given Time.

1. Find the Sun's true Longitude at the given Time. And if the given Time be apparent, convert it into Mean.

2. From the Tables, *Epochæ mediorum motuum Lunæ & Apogæi ejus* (H h 4 &c); *Epochæ motus Nodi aſcendentis Lunæ* (I i 2); *Medii motus Lunæ Apogæi & Nodorum ejus ad dies menſium* (I i 3 &c.) and, *Medii motus Lunæ, Apogæi, & Nodorum ad horas & minuta horaria,* take out the mean Places of the Moon, her Apogee and Node to the given mean Time. The mean motions of the Moon and her Apogee for months, days, and parts of a day, muſt be added to their radical mean Longitudes found in the Table *Epochæ mediorum motuum* &c. (H h 4); but the mean Motions of the Node muſt be ſubtracted therefrom.

3. In *Tabula Æquationum annuarum Lunæ, Apogæi & Nodorum,* (L l 3 and the following) find the Equations of the Moon, her Apogee, and Node, anſwering to the Sun's mean Anomaly, and add them to, or ſubtract them from, the reſpective mean Places, as the Table ſhall direct.

4. The Argument of the ſecond Equation of the Moon, which is entitled *Æquatio ſemeſtris prima* (M m) is the diſtance of the Sun from the Moon's Apogee, and is called the Annual Argument.

5. The Argument of the third Equation entitled *Æquatio ſemeſtris altera* (ibid.) is the diſtance of the Sun from the Node.

6. For the Argument of the fourth Equation (ibid.) add the Place of the Sun's Apogee to the Annual Argument, and ſubtract their ſum from the Place of the Moon thrice equated. But this being Sir *Iſaac Newton*'s ſixth Equation, its argument ſhould be corrected by the addition or ſubtraction of the Equation of the Moon's Center *.

7. In the ſecond column of *Tabula Æquationis Apogæi & Excentricitatum Orbis Lunæ* (M m 2 &c.) is the ſecond Equation of the Moon's Apogee; in the fourth, the Excentricity of her Orbit; and in the ſeventh, the Logarithm for finding the Equation of the Center, all anſwering to the Annual Argument.

8. The Moon's Apogee twice equated, ſubtracted from the Moon's Place four times equated, gives her Mean Anomaly; which, when leſs than ſix Signs, is the Argument of *Tabula pro expediendo calculo Æquationis centri Lunæ* (N n &c.); but when greater, that Table muſt be entered with its complement to 12 Signs. From this Table take the Equation anſwering both to this Argument and to the Logarithm found in the 7th column of the preceding Table, and thereby encreaſe or diminiſh (as the Table ſhall direct) half the Mean Anomaly, or of half its Complement to 12 Signs; and the log. Tangent of the Angle ſo obtained added to the Logarithm abovementioned, will give the log. Tangent of half the true Anomaly, or of half its complement to 12 Signs. And the difference between the true Anomaly and the Mean is the Equation of the Center; to be ſubtracted when the M. Anomaly is leſs than ſix Signs, and to be added when greater.

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* To correct the Argument of this Equation, ſubtract the Moon's Apogee once equated from the Place of the Moon, and take the remainder for the Moon's mean Anomaly. In *Tabula Æquationum Apogæi & Excentricitatis Orbis Lunæ* (M m 2 &c.) take the Logarithm in the 7th column anſwering to the Annual Argument, and add it to the logarithmic Tangent of half the Moon's mean Anomaly. Their ſum will be the tangent of an Angle, the double of which ſubtracted from the Moon's M. Anomaly will give the correction of this Argument; to be ſubtracted from the Argument, if the Moon's Mean Anomaly be leſs than ſix Signs, but added if greater. Thus in the following example you will have

	s	°	′		°	′		
For the Moon's M. Anomaly	4	18	48	its half	69	24	tan.	10.4249
Log. pro æquatione Centri Lunæ				—	—	—	—	9.9422
An Angle whoſe double is	4	13	32					10.3671
Correction to be ſubtracted	—	5	16					

9. The Sun's true Longitude ſubtracted from the Place of the Moon, now five times equated, is the Argument of *Tabula Variationis ſive Reflectionis* (N n 4) which exhibits the Variation at the mean diſtance of the Earth from the Sun. To the logiſtical Logarithm of the quantity found in this Table, add the Logarithm in the Table *Logarithmi pro correctione variationis* (ibid.) anſwering to the Sun's mean Anomaly; their ſum will be the logiſtical Logarithm of the true variation; which added to, or ſubtracted from the Moon's place five times equated, will give her true Place in her Orbit.

10. In *Tabula pro computo Latitudinis Lunæ* (O o) find the ſecond Equation of the Node, the log. Sine of the Inclination, and the greateſt Reduction; all anſwering to the Argument of the third Equation. The Longitude of the Node already once equated, being corrected by this Equation, as the Table ſhall direct, and ſubtracted from the true Place of the Moon in her Orbit, will give the Argument of Latitude.

To the log. Sine of the Inclination, add the log. Sine of the Argument of Latitude, their ſum, deducting Radius, will be the log. Sine of the Moon's Latitude; which, when the Argument of Latitude is leſs than ſix Signs, is North; when greater, South.

To the logiſtical Logarithm of the greateſt Reduction, add the arithmetical complement of the log. Sine of ‸double the Argument of Latitude, their ſum will be the logiſt. Logarithm of the true Reduction; which, ſubtracted from the true Place of the Moon in her Orbit in the firſt and third Quadrant of the Argument of Latitude, or added thereto in the ſecond and fourth Quadrant of the ſame, will give the Moon's Longitude in the Ecliptic.

11. In *Tabula Parallaxium Lunæ horizontalium in Syzygiis* (O o 2) find the Parallax anſwering both to the Moon's true Anomaly, and the Excentricity of her Orbit (found by Precept 7th); the logiſtical Logarithm of this Parallax, added to the Logarithm found in the Table *Logarithmi pro Parallaxi extra Syzygias* anſwering to the Moon's diſtance from the neareſt Syzygy, will give the logiſtical Logarithm of the true horizontal Parallax of the Moon.

12. The proportion of the Moon's horizontal Parallax to her horizontal Diameter is as 60 to 33. Add therefore 2596 (the logiſtical Logarithm of 33′) to the log. Logarithm of the true horizontal Parallax, it will give the log. Logarithm of the horizontal Diameter of the Moon.

The horizontal Diameter of the Moon is to the Moon's Diameter in Longitude, as the Coſine of the Moon's Latitude to the Radius. And the horizontal Diameter is to the Diameter in R. Aſcenſion, as the Coſine of her Declination to the Radius.

The quantity found in the Table *Aug. Diam. Lunæ* (O o 5) anſwering to the Moon's Diſtance from the Vertex (and likewiſe to her Diſtance from her Apogee) being added to the Moon's horizontal Diameter will give her apparent Diameter; which, encreaſed in the reſpective proportions above mentioned, will give her apparent Diameters in Longitude and R. Aſcenſion.

EXAMPLE.

In the year 1725, *Dec.* 5, the Weſtern Limb of the Moon, was obſerved by Dr. *Halley* to paſs the Meridian of the Obſervatory at *Greenwich* at 9h. 8m. 5s mean time, its obſerved right aſcenſion being 42°. 26′. 15″, and the diſtance of the lower Limb from the Vertex 34°. 9′. 15″.

Required the Moon's place at the ſame time according to the Tables.

	☉ M. Anom.	☉ Apog.	☉ true Long.
	s ° ′ ″	s ° ′ ″	s ° ′ ″
	5 17 20 40	3 8 4 22	8 24 59 2

	☽ M. Long.	☽ Apog.	☽ ☊
	s ° ′ ″	s ° ′ ″	s ° ′ ″
1725	8 19 36 54	7 24 56 18	1 13 11 2
Dec. 5.	4 26 47 52	1 7 46 2	17 57 7
Hour 9.	4 56 28	2 30	1 12
Min. 8. ſec. 5.	4 26	2	1
	1 21 25 40	9 2 44 52	0 25 12 42
Annual Equat.	+ 2 38	− 4 28	+ 2 7
	1 21 28 18	9 2 40 24	0 25 14 49
′ ″ 2d Eq. + 1 0 3d − 0 41 4th − 1 41	− 1 22	− 2 41 0	+ 1 19 7
	1 21 26 56	8 29 59 24	0 26 33 56
Eq. of Centre	− 5 3 56	4 21 27 32	1 15 46 45 ☽
		☽ me. Anom.	
	1 16 23 0		0 19 12 49
† Variation	− 36 15	½ me. Anom.	Arg. Lat.
		° ′ ″	
	1 15 46 45	70 43 46	
‡ Reduction	− 4 11	− 1 47	
☽ Long Eclip.	♉ 15 42 34	70 41 59 tan.	10.455683
* ☽ Lat. North	1 39 57	Log. for Eq. centre	9.942214

68 11 48 tan. 10.397897
4s 16 23 36 its double

− 5 3 56 Equation of Centre to be ſubtracted.

Arg. of the Equations.
s ° ′ ″
5 17 20 0 ☉ M. An.
Arg. of the ann. Equat.
8 24 59 2 ☉ Long.
9 2 40 24 ☽ Apog.
11 22 18 38
Annual Arg.

Excentr. 066429

8 24 59 ☉ Long.
0 25 15 ☽ ☊
7 29 44
Arg. 3d Equ.
3 8 4 ☉ Apog.
11 22 18 An Arg.
3 0 22
1 21 28 ☽ Long.
10 21 6
− 5 16 Correction.
10 15 50
Arg. 4th Equ.
1 16 23 ☽
8 24 59 ☉ Long.
4 21 24 ☽ fr. ☉
Arg. of Variation.

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† ☽ Simple variat. − 34′ 18″ L L 2430 ‡ Greateſt Reduct. − 6′ 44″ L L 9499 * Log. ſin Incl. 8.94616
Correction from the table 9.9758 Sin. doub. Arg. Lat. Ar. Co. 2065 Log. ſ. Arg. Lat. 9.51732
☽ True variation − 36 15 L L 2188 True Reduct. − 4 11 L L 11564 ☽ Lat. Nor. 1 39 57 8.46348

Now

Now to find the Moon's true place from the obſervation.

			°	′	″
The horizontal parallax of the Moon in the Syzygies, to the true Anomaly 4^{s}. 16°. 23′, and to the excentricity 0664 is 60′. 3″, whoſe logiſtical logarithm is ——	− 3				
The logarithm for the parallax *(extra Syzygias)* to the diſtance of ☽ fr. ☉ 4^{s}. 21°. 24′ (or 1^{s}. 8°. 36′ from the Oppoſition) is — — — — — —	24				
Their ſum is the logiſt. log. of the true horizontal parallax	21	=	0	59	43
To which add the conſtant logarithm — — —	2596				
And we have the logiſt. log. of the Moon's horiz. diam.	2617	=	0	32	50
The obſerved diſt. of the Moon's lower limb from the vert. was			34	9	15
To which add the refraction — — — — — —			+	0	36
Gives its apparent diſtance from the vertex, clear of refraction			34	9	51
To the logiſt. log. of the horiz. parallax, found above —	21				
Add the Arith. Compl. of the ſine of the diſtance of the Moon's limb from the vertex — — — —	2506				
The ſum will be the logiſt. log. of the parallax in altitude of the Moon's lower limb * — — — —	2527	=	0	33	32
This being ſubtracted from the correct apparent diſtance of the Moon's limb from the vertex, gives its true diſtance from the ſame — — — — —			33	36	19
Subtract alſo the horizontal ſemidiameter of the Moon —				16	25
Remains the true diſtance of the Moon's centre from the vertex — — — — — — —			33	19	54
The compl. of the latitude of the Obſervatory added thereto			38	31	30
Gives the true diſt. of the Moon's centre from the North Pole			71	51	24
To the logiſt. log. of the Moon's horizontal diameter —	2617				
Add the log. coſine of the Moon's declination, or log. ſine of her diſtance from the Pole — — — —	9778				
Their ſum will be the logiſt. log. of the Moon's horizontal diameter in right Aſcenſion — — — —	2395	=	0	34	34
To the obſerved right Aſcenſion of the Moon's Weſtern limb — — — — — —			42	26	15
Add the Moon's ſemidiameter in right Aſcenſion — —			0	17	17
Their ſum will be the true right Aſcenſion of the Moon's centre — — — — — —			42	43	32

The Moon's right Aſcenſion 42°. 43′ 32″, and her diſtance from the North Pole 71°. 51′. 24″ being given, her longitude in the ecliptic will be found in ♉ 15°. 42′. 12″, with 1°. 38′. 37″ North latitude.

Here the Longitude of the Moon, found from the Obſervation, is 22″ leſs than the Tables give it.

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* The Parallax in altitude being as the ſine of the *apparent* diſtance from the vertex; whenever the apparent diſtance is not given, the true diſtance may be increaſed by gueſs, and from thence the parallax in altitude found. Or, if the true diſtance from the vertex be taken for the apparent, and the parallax in altitude be found from it, that true diſtance increaſed by this parallax may be taken for the apparent; and the parallax thence found will be very near the truth.

To

To correct the computed Places of the Moon.

The Errors of the Tables may in a great meaſure be corrected by help of the laſt column of the Tables entitled *Lunæ Meridianæ &c.* (☾ b and the following pages). For after a Period of 223 Synodical Months, the Errors will recur nearly of the ſame magnitude.

To find the day in theſe Tables which correſponds to the time for which the correction is required, if that time be after *Dec.* 27, 1739, ſubtract this Period or a multiple thereof, or a Period of 111 Synodical Months, (which are to be found in the Table entitled *Periodi Lunares* (* * E e 4) from the given time; but if the given time precede *Jan.* 13, 1722, add the like Periods thereto, ſo that the Remainder or Sum may fall on a day between *Jan.* 13, 1722 and *Dec.* 27, 1739; and if there was an obſervation at *Greenwich* on the day ſo found, the laſt column of the Tables *Lunæ Meridianæ &c.* will exhibit the Error of the Computation. But if the day correſponding to the given Time be not found in the Tables *Lunæ Meridianæ &c.* no correction can be had but by comparing the Errors of the adjacent days, when they happen to lie near enough for that purpoſe to the day ſought.

And obſerve, that when the Period of 223 Synodical Months contains no more than four Leap Years, it will conſiſt of 18 years, 11 days, 7 hours, 43 min. and 20 ſec. but whenever it contains five, it will be compleated in 18 years, 10 days, 7 hours, 43 minutes, and 20 ſeconds.

EXAMPLE.

To find from the Tables corrected, the Time the Moon's Eaſtern Limb paſſed the Meridian of Greenwich *on* Dec. 28, 1745.

In this Example, the Period of 18 years will contain five Leap Years; therefore from the given time ſubtract 18 years 10 days, and we ſhall have *Dec.* 18, 1727, for the day in the Tables *Lunæ Meridianæ &c.* which correſponds to the given time, on which day the Moon's Limb was obſerved to paſs the Meridian at $13^{h}.\ 45^{m}.\ 21^{s}$ Mean Time. 18 years and 10 days want $7^{h}.\ 43^{m}.\ 20^{s}$ of a compleat Period, in which time the Moon's mean Motion is 4°. 14′. 22″; and the Meridian paſſes over an Arc of the Equator equal to this Arc of Mean Motion in $16^{m}.\ 55^{s}$ of mean Time: Subtract therefore $16^{m}.\ 55^{s}$ from the time of the Obſervation, and there will remain $13^{h}.\ 28^{m}.\ 26^{s}$ for the time of the paſſage of the Moon's Eaſtern Limb over the Meridian of *Greenwich*, *Dec.* 28, 1745.

The Moon's computed Longitude to this time is ♌ 6°. 43′. 8″. her Latitude 3°. 49′. 24″ N.

In the laſt column of the Table *Lunæ Meridianæ &c.* the Error on *Dec.* 18, 1727, is — 3′. 1″; therefore 3″ 1′ being added to the computed Longitude gives ♌ 6°. 46′. 9″ for her correct Longitude at that time.

	°	′	″	°	′	″
Hence the R. Aſcenſion of the Moon is found to be				130	12	38
which encreaſed by her true Diameter in R. Aſcenſion					17	18
is the Right Aſcenſion of the Eaſtern Limb — ——				130	29	56
To the Sun's Mean Longitude at the given time — —	288	25	2			
add an Arc proportional to the ſame mean time $13^{h}.\ 28^{m}.\ 26^{s}$.	202	6	30			
their ſum is the R. Aſcenſion of the Meridian — —				130	31	32
which is paſt the Moon's Limb by an Arc of — —				0	1	36

This Arc the Meridian paſſes over in about 6½ ſeconds of time, which

which ſubtracted from the given time would give the time of the Tranſit ſought, if the Moon by encreaſing her R. Aſcenſion after her Limb paſſed the Meridian, had not diminiſhed its diſtance from the ſame. To allow for this, add 4″ to the Arc of diſtance 0°. 1′. 36″, and it will become 0°. 1′. 40″, which the Meridian paſſes over in 7^{s} of time; therefore from the given Time 13^{h}. 28^{m}. 26^{s}, ſubtract 7^{s}. the remainder 13^{h}. 28^{m}. 19^{s} will be the mean time the Eaſtern Limb of the Moon paſſed the Meridian of *Greenwich* according to the Tables corrected, which was obſerved by the Rev. Dr. *Bradley* at 13^{h}. 28^{m}. 21^{s}.

To find the Longitudes of Places on the Earth by Obſervations of the Moon.

The Obſervations fitteſt for this purpoſe are, either the appulſes of the Moon to fixt Stars; or her diſtance from a fixt Star lying near the Parallel of Latitude in which the Moon then is; or laſtly, the diſtance of the Moon from the Sun in her firſt or laſt Quarter. From any of theſe Obſervations, the Latitude of the Place of Obſervation being given, the diſtance of the Meridian from that of *Greenwich* may be diſcovered, by finding the time reckoned at *Greenwich* when the Obſervation was made: for the difference between that time and the time in the unknown Meridian, will give the diſtance of the two Meridians from each other.

EXAMPLE.

In the year 1737, Jan. 1, 6^{h}. 4^{m}. 30^{s} *apparent time (which converted into mean is* 6^{h}. 13^{m}. 40^{s}*) in the Latitude* 65°. 50′. 50″ *N. an Occultation of the Star γ Tauri was obſerved. Required the diſtance of the Meridian under which the Obſervation was made, from that of* Greenwich.

This day is not to be found in the Tables *Lunæ Meridianæ &c.* Subtract therefore the Period of 111 Synodical Months, and it will give *Jan.* 11, 1728, for a day correſponding to the time of the Obſervation. On this day the Error is found to be — 1′. 18″.

The Longitude of the Star at the given time, deduced from the Britannic Catalogue was ♊ 2°, 7′. 0″. Its Latitude 5°. 46′. 22″ South.

Aſſume the Time at *Greenwich* by the help of any *London* Ephemeris; one of which puts down the Conjunction of the Moon with this Star at about five in the afternoon. The Moon's Longitude by the Tables to this Time is ♊ 2°. 1′. 20″ which corrected by the Error above mentioned will be ♊ 2°. 2′. 38″, with Latitude 4°. 50′. 18″ S.

	° ′ ″	° ′ ″
The horizontal Parallax of the Moon at the given time is		0 55 41
To the mean Longitude of the Sun — — — —	292 11 24	
add the mean Time of the Obſervation in the unknown Meridian 6^{h}. 13^{m} 40^{s} — — — —	93 25 0	
their Sum is the R. Aſcenſion of the unknown Meridian —		25 36 24
The Nonageſſimal degree of the Ecliptic in the Latitude 65°. 50′. 50″ — — — —		♉ 24 56 24
The Parallactic Angle at the Moon — — —		5 33 2

The

	°	′	″
The Moon's true diſtance from the vertex — —	55	12	54
Her apparent Semidiameter — — —	0	15	28
The moon's true diſtance from the Vertex encreaſed by an aſſumed Parallax in Altitude — — — —	55	59	0
hence the true Parallax in Altitude — — —	0	46	10
* The Parallax in Longitude, to be added to the true Longitude —	0	4	28
The Parallax in Latitude, to be added to the true Latitude —	0	45	57

Hence the apparent Place of the Moon's Center was ♊ 2°. 7′. 6″ with Latitude 5°. 36′. 15″ S. which being 6″ forwarder in Longitude than the Star, and the Occultation being made by the Eaſtern Limb of the Moon, the Occultation muſt have preceded the aſſumed Time.

To correct the time, convert the Moon's apparent Semidiameter 15′. 28″, and likewiſe the apparent difference of Latitude between the Moon and Star 10′. 7″, into Seconds: the difference of the Squares of theſe quantities is 492735″, whoſe Square Root 702″ or 11′. 42″ will be nearly equal to the apparent diſtance of the Moon's Center from the Star in Longitude at the inſtant of Occultation. To this add the 6″ whereby the apparent Longitude of the Moon's Center was found by the calculation to precede the Star; their ſum 11′. 48″ will be nearly equal to the Arc of Longitude by which the Moon is too forward for the Occultation. By the Tables of Mean Motions, the time the Moon is paſſing over this Arc is found to be 21′. 30″; which ſubtracted from the time firſt aſſumed, will give 4ʰ. 38ᵐ. 30ˢ, and to this time repeat the whole computation.

The Moon's correct Longitude 1737, *Jan.* 1, 4ʰ. 38ᵐ. 30ˢ is ♊ 1°. 51′. 13″, her Latitude 4°. 49′. 59″ S.

		°	′	″
The R. Aſcenſion of the unknown Meridian — — —		25	35	31
The Nonageſſimal Degree of the Ecliptic — — —	♉	24	55	57
The Parallactic Angle — — — —		5	24	32
The Parallax in Longitude, additive — —		0	4	21
The Parallax in Latitude, additive — — —		0	45	57
The apparent diſtance of the Star from the Moon's Center in Longitude		0	11	26
Their apparent diſtance in Latitude — — —		0	10	26

Convert the Moon's apparent Semidiameter 15′. 28″, and likewiſe the apparent difference of Latitude 10′. 26″ into ſeconds, as before; the Square Root of the difference of the Squares of theſe quantities 11′. 25″, will be the apparent diſtance of the Star

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* In applying the Parallaxes to the computed Places of the Moon, obſerve

1. When the Moon is to the Eaſt of the Nonageſſimal Degree of the Ecliptic, the Parallax in Longitude muſt be added to the true Longitude, but when ſhe is to the Weſt thereof it muſt be ſubtracted, to obtain the apparent Longitude.
2. The like Rule holds for the Right Aſcenſions, according as the Moon is to the Eaſt or to the Weſt of the Meridian of the Place of Obſervation.
3. The Parallax in Latitude added to the true diſtance of the Moon from that Pole of the Ecliptic which is neareſt to the Vertex of the Place of Obſervation, will give her apparent diſtance from that Pole; whence it will appear whether it is to be added to or ſubtracted from the true Latitude to obtain the apparent. But between the Tropics where the Ecliptic becomes Vertical once in 24 hours, at ſuch times it is always to be added to the true Latitude.
4. In like manner the Parallax in Declination added to the true diſtance of the Moon from that Pole of the Equator which is neareſt to the Vertex of the Place of Obſervation, will give her apparent diſtance from that Pole, whence it will appear whether it is to be added to or ſubtracted from the true Declination. But in Places of the earth which have no Latitude, the Parallax in Declination is always additive.

from

from a circle of Latitude paſſing over the Moon's Center ; which encreaſed in the proportion of the Coſine of the Latitude of the Star to the Radius, will give 11'. 28 ½" for the apparent diſtance in Longitude of the Star from the Center of the Moon, at the inſtant of Occultation. This exceeds the diſtance found above by 2 ½", and the time requires a farther diminution.

The Moon's apparent Longitude to the time firſt aſſumed was ♊ 2°. 7'. 6"; that to the corrected time ♊ 1°. 55'. 34." their difference 11'. 32" is the viſible motion of the Moon in Longitude in $21^{m}. 30^{s}$, the interval between the two times. And

As 11'. 32" : 2½" :: $21^{m}. 30^{s}$: 5^{s}—.

Therefore ſubtracting 5^{s} from $4^{h}. 38^{m}. 30^{s}$, there will remain $4^{h}. 38^{m}. 25^{s}$ for the mean Time at *Greenwich* when the Occultation happened under the unknown Meridian. And this time ſubtracted from the given mean time of the Obſervation leaves $1^{h}. 35^{m}. 15^{s}$, which converted into an Arc is 23°. 48'. 45" the difference of Meridians ſought.

But as the Occultations of Stars are not ſo frequently to be obſerved at Sea, the diſtance of the Moon from a fixt Star is an Obſervation likely to be of more uſe to Mariners. For this purpoſe a Star ſhould be choſen as near as may be to the Parallel of Latitude in which the Moon is at the time of Obſervation; by which means the computed diſtance of the Moon from the Star will be little affected by Errors in the Moon's computed Latitude. And if the Moon's diſtance from two ſuch Stars, one preceding her Place in Longitude and the other following it, be obſerved, and a mean taken between the times found from each Obſervation, the reſult will on many accounts be more to be depended on than from a ſingle Obſervation.

The diſtance of the two Meridians may commonly be known within three or four degrees of the truth from the Ships Journals, and from thence the time at *Greenwich* may be aſſumed for the firſt computation. Having found the Longitude and Latitude of the Moon to the time aſſumed, correct the Longitude (where it can be done) as above directed, and find the Moon's Right Aſcenſion, and diſtance from that Pole of the Equator which is neareſt to the Vertex of the Place. Then find her Azimuth, and true diſtance from the Vertex; to the latter add the difference between the Moon's Parallax in altitude and the Refraction, which will give her viſible diſtance from the Vertex. Find the Star's Azimuth to the ſame time, and its diſtance from the Vertex, from which ſubtract the Refraction.

Then in a ſpherical Triangle are given, two ſides, which are the viſible diſtances of the Moon and Star from the Vertex, and the Angle between them, *viz.* the azimuthal diſtance of the Moon's Center from the Star, to find the third ſide; which is the viſible diſtance of the Moon's Center from the Star: And this ſide diminiſhed or encreaſed by the Moon's apparent Semidiameter, according as the nearer Limb to the Star or the more remote one was obſerved, will be equal to the obſerved diſtance of the Moon's Limb from the Star, in caſe the time at *Greenwich* was rightly aſſumed: but if not, correct the time by gueſs, and repeat the computation; and by comparing the Errors, the time at *Greenwich* may be obtained to a ſufficient exactneſs, and thence the diſtance between the two Meridians.

EXAMPLE.

In the year 1725, Dec. 10, $11^{h}. 14^{m}$ *of apparent time (which is* $11^{h}. 13^{m}$ *mean Time) at a Place to the Weſt of* Greenwich, *in the Latitude of* 40° *N. the Star* γ *Leonis was obſerved* 20°. 50' *diſtant from the nearer Limb of the Moon. Required the diſtance of the unknown Meridian from that of* Greenwich.

Aſſume $13^{h}. 21^{m}$ for the mean time at *Greenwich* when the Obſervation was taken.

The

	° ′ ″	° ′ ″
The Moon's computed Longitude at this time was	♌ 4 4 2	
The Error of the Tables	+ 48	
The Moon's correct Longitude		♌ 4 4 50
her Latitude, North		4 59 47
her horizontal Parallax		1 0 18
The Right Aſcenſion of the Moon		127 42 28
her diſtance from the North Pole		65 52 43
The Right Aſcenſion of the unknown Meridian (⊙ 270 31 8 $11^{h}.13^{m}.$ = 168 15 0)		78 46 8
The Moon's Azimuth		84 0 10
her diſtance from the Vertex	43 47 7	
the true Parallax in altitude	+ 42 16	
The Refraction	− 0 53	
The Moon's viſible diſtance from the Vertex		44 28 30
Her apparent Semidiameter		0 16 47
The Longitude of the Star γ Leonis		♌ 25 45 0
Its Latitude, North		8 47 27
The Right Aſcenſion of the Star		151 11 32
Its diſtance from the North Pole		68 47 21
Its Azimuth		96 10 40
The Stars true diſtance from the Vertex	63 22 13	
The Refraction	− 1 46	
The Stars apparent diſtance from the Vertex		63 20 27
The azimuthal angle between the Star and the Moon's Center		12 10 30
The viſible diſtance of the Moon's Center from the Star		21 13 13
Subtract the Moon's apparent Semidiameter		0 16 47
remains the viſible diſtance of the Moon's Limb from the Star		20 56 26

which exceeds the obſerved diſtance by 6′. 26″. therefore the aſſumed time requires a correction.

Add 15^{m} to the aſſumed time (for the Moon was moving toward the Star), and the correct Longitude of the Moon to 13^{h}. 36^{m} of the ſame day, will be found ♌ 4°. 14′. 10″, with North Latitude 4°. 59′. 40″; and having again found the Viſible Diſtances of the Moon and Star from the Vertex, with the Angle comprehended between them, we ſhall thence find the diſtance of the Moon's Limb from the Star 20°. 47′. 17″, which is deficient of the obſerved diſtance by 2′. 43″. Therefore the Moon's Limb approaches the Star by an Arc of 9′. 9″ in 15 minutes of time. And

As 9′. 9″ : 6′. 26″ : : 15^{m} : 10^{m}. 33^{s}.

Add therefore 10^{m}. 33^{s}, to 13^{h}. 21^{m}, and it will give the time at *Greenwich* 13^{h}. 31^{m}. 33^{s}, and the difference of the times 2^{h}. 18^{m}. 33^{s}. Hence the diſtance between the two Meridians is 34°. 38′. 15″.

In this Example the difference between the diſtances of the Moon and Star from the Vertex is ſo great, that the difference of Refraction is very conſiderable, and therefore the viſible diſtance of the Moon from the Star could not be accurately determined without finding both thoſe diſtances from the Vertex. But where the Altitudes of the Moon and Star are not very unequal *, the Refraction may at once be allowed for in the obſerved diſtance by adding as many ſeconds thereto, as that conſiſts of degrees; and the work will be abbreviated, by computing the apparent diſtance of the Moon from the Star, by means of the Parallaxes in Longitude and Latitude.

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* See the Philoſophical Tranſaction, N° 368, page 169.

EXAMPLE.

In the year 1725, Dec. 10, 12h. 50m *mean time, at a Place to the Weſt of* Greenwich *in the Latitude of* 48° *North, the Star β Tauri was obſerved* 47°. 57′. 12″ *diſtant from the farther Limb of the Moon. Required the diſtance of the unknown Meridian from that of* Greenwich.

To correct the obſerved Arc for the Refractions add 48″ thereto, it will become 47°. 58′. 0″. Aſſume 56° for the diſtance of the unknown Meridian from *Greenwich*, which will give 16h. 34m for the time to be aſſumed.

		°	′	″
The Moon's Longitude computed to this Time is -	♌	6	4	0
The Error of the Tables - - - - - -	+	0	48	
The Moon's correct Longitude - - -	♌	6	4	48
Her Latitude North - - - - -		4	58	6
The horizontal Parallax of the Moon - -		1	0	12
The Right Aſcenſion of the unknown Meridian -		103	9	3
The Nonageſſimal Degree of the Ecliptic - -	♋	9	40	0
The Moon's Parallax in Longitude, additive - -		0	24	38
Her Parallax in Latitude, ſubtractive -		0	21	23
The apparent Longitude of the Moon - -	♌	6	29	26
Her apparent Latitude, North - - -		4	36	43
The Longitude of the Star β Tauri - -	♊	18	43	50
Its Latitude, North - - -- --		5	21	34

Here then are given in a Spherical Triangle, two Sides, one the apparent diſtance of the Moon from the North Pole of the Ecliptic 85°. 23′. 17″, the other the diſtance of the Star from the ſame 84°. 38′. 26″. with the Angle between them 47°. 45′. 36″, which is the difference of the Longitudes of the Moon and Star, to find the third

	°	′	″
ſide - - - - - - - - --	47	34	25
To which add the apparent Semidiameter of the Moon - --	0	16	48
it will give the apparent diſtance of the farther Limb of the Moon from the Star at the time aſſumed - - - - --	47	51	13
The obſerved diſtance corrected of Refraction was - - -	47	58	0
Their difference - - - - - --	0	6	47

Add 15m to the aſſumed time for a correction, and it will give 16h. 49m. To this time the correct Longitude of the Moon is ♌ 6°. 14′. 7″, her Latitude 4°. 57′. 58″ North. Find the Parallaxes in Longitude and Latitude over again, and the reſolution of the Spherical Triangle will give 47°. 43′. 51″ for the apparent diſtance of the Moon's Center from the Star; which encreaſed by the apparent Semidiameter of the Moon becomes 48°. 0′. 39″, exceeding the obſerved diſtance of the Moon's Limb from the Star by 2′. 39″. And this Error added to the former — 6′. 47″, will give 9′. 26″ for the Moon's apparent motion from the Star in 15m of time. And

As 9′. 26″ : 6′. 47″ :: 15m. : 10m. 42s.

Therefore

Therefore add 10^{m}. 42^{s} to 16^{h}. 34^{m} the Time firſt aſſumed, it will give 16^{h}. 44^{m}. 42^{s} for the Time at *Greenwich* when the Obſervation was taken under the unknown Meridian. And the difference of the Times 3^{h}. 54^{m}. 42^{s} gives the diſtance between the two Meridians 58°. 40′. 30″.

By a like method of Computation may the difference of Meridians be found from Obſervations of the Moon's diſtance from the Sun in her firſt and laſt Quarter. And the work will be ſomewhat more ſimple as the Sun has no Latitude. But in this caſe the computed diſtance muſt be corrected by the Semidiameter of the Sun as well as by that of the Moon. And the Sun's Diameter is to be found in *Tabula Motuum horariorum, Diametrorum &c.* (O o 5) anſwering to his Mean Anomaly.

PRECEPTS FOR COMPUTING THE PLACES OF THE PLANETS.

To find the Place of a Superior or of an Inferior Planet for any given Time.

1. Find the Sun's true Longitude for the given Time, and if the given Time be apparent convert it into mean. From the Table, *Logarithmi Diſtantiarum Solis a Terrâ* (E e 4) take out the Logarithm anſwering to the Sun's Mean Anomaly.

2. From the Tables entitled *Epochæ mediorum motuum*, and thoſe entitled *Medii motus*, collect the Mean Places of the Planet, of its Aphelion and of its Node to the given mean Time.

3. The Place of the Aphelion ſubtracted from the Mean Place of the Planet will give its Mean Anomaly; to which find the Equation of the Center in the Table entitled *Tabula Æquationum*. Add or ſubtract this as the Table ſhall direct, to or from the mean Place of the Planet, it will give the Planets true heliocentric Place in its Orbit.

4. From the Planets heliocentric Place in its Orbit, ſubtract the Longitude of the Node, the Remainder is called the Argument of Latitude; with which enter the Table entitled *Tabula Latitudinaria*, and take out the Inclination of that point of the Planets Orbit, the Reduction, and the Logarithm of Curtation, anſwering thereto. The Reduction added to the heliocentric Place of the Planet in its Orbit, or ſubtracted therefrom, as the Table ſhall direct, will give the Planets true Longitude in the Ecliptic.

5. From the Table *Logarithmi diſtantiarum ——— a Sole*, take the Logarithm anſwering to the Planets Mean Anomaly, from which ſubtract the Logarithm of Curtation, the remainder will be the Logarithm of the Curtate diſtance of the Planet from the Sun.

6. The heliocentric Longitude of a ſuperior Planet ſubtracted from the Longitude of the Sun, or the Sun's Longitude ſubtracted from the heliocentric Longitude of an Inferior Planet, is called the Angle of Commutation.

7. To the difference of the Logarithms of the diſtance of the Sun from the Earth, and of the Curtate Diſtance of the Planet from the Sun, add the Logarithmic Tangent of 45°, their Sum will be the Logarithmic Tangent of an Angle exceeding 45°.

To the Logarithmic Tangent of the Exceſs of this Angle above 45°, add the Logarithmic Tangent of half the Angle of Commutation, their ſum (ſubtracting Radius) will be the Log. Tangent of an Angle, which, added to half the Angle of Commutation of a Superior Planet, or ſubtracted from half the Angle of Commutation of an Inferior Planet,

Planet, will give the Elongation of that Planet. But when half the Angle of Commutation exceeds three Signs, its Complement to ſix Signs muſt be encreaſed or diminiſhed by the Angle above found to give the Elongation.

8. If the Angle of Commutation be leſs than ſix Signs, the Elongation of a Superior Planet ſubtracted from the Sun's Longitude, or the Elongation of an Inferior Planet added thereto, will give the Planet's true Geocentric Longitude. But if the Angle of Commutation exceed ſix Signs, the contrary muſt be obſerved in either caſe.

9. The Tangent of the Inclination, is to the Tangent of the Planets geocentric Latitude, as the Sine of the Angle of Commutation, to the Sine of the Angle of Elongation.

EXAMPLE I.

Required, the Geocentric Place of the Planet Venus, June 13, 1^h. $17\frac{1}{2}^m$, *mean time in the year* 1690.

	☉ Me. Anom.	☉ Apog.	♀ Me. long.	♀ Aphel.	♀ Node	Inclin. N.
	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′ ″	° ′ ″
1690	6 12 55 43	3 7 28 3	7 22 26 18	10 6 22 5	2 13 52 43	
June 13	5 11 38 19	0 27	8 22 45 20	25	14	2 58 42
Hour 1	2 28		4 0			
Min. 17	42	3 7 28 30	1 8	10 6 22 30	2 13 52 57	
Sec. 30	1		2	6 8 54 18	2 1 31 20	
				♀ Me. Anom.	Arg. lat.	

☉ M. Anom.	11 24 37 13		4 15 16 48
Apog.	3 7 28 30	Proſth.	+ 7 29
	3 2 5 43		4 15 24 17
Proſth.	+ 10 41	Reduction	− 2 31
☉ Long.	3 2 16 24	♀ Helioc.	4 15 21 46
♀ Elong.	+ 17 38 40	☉ Subtr.	3 2 16 24
♀ Geo. Long.	3 19 55 4	Commut.	1 13 5 22
♀ Lat. Nor.	1 19 21	Half	21° 22 41

Log. diſt. Earth fr. Sun		5,007256
Log. diſt. ♀ fr. Sun		4,855745
Tang.	54 47 51	10,151511
	−45 00 00	
Tang.	9 47 51	9,237255
Tang.	21 32 41	9,596391
Tang.	3 54 1	8,833646
	17 38 40 ♀ Elongation.	

Commut.	43 5 22	Ar. Co.	0,16549
Elong.	17 38 40	Sin.	9,48160
Inclinat.	2 58 42	tang.	8,71624
♀ Lat.	1 19 21N.	tang.	8.36333

EXAMPLE II.

Required, the Geocentric Place of the Planet Jupiter, Dec. 3, 6^{h}. 30^{m}. *mean time, in the year* 1690.

	☉ M. Anom.	☉ Apog.	♃ M. long.	♃ Aphel.	♃ Node	Inclin. South
	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′ ″	° ′ ″
1690	6 12 55 43	3 7 28 3	11 13 7 16	6 9 21 48	3 7 25 50	1 18 58
Dec. 3	11 2 8 51	0 56	28 0 58	1 6	46	
Hour 6	14 47		1 15			
Min. 30	1 14	3 7 28 59	6	6 9 22 54	3 7 26 36	
				6 1 46 41	9 3 53 56	
☉ M. Anom.	5 15 20 35		0 11 9 35	♃ M. Anom.	Arg. Latit.	
☉ Apog.	+ 3 7 28 59	♃ Proſth.	+ 10 57			
	8 22 49 34		0 11 20 32	Log. diſt. ♃ fr. ☉		5,694521
Proſt.	− 30 2	Reduction	+ 0 4	Log. diſt. ⊖ fr. ☉		4,992841
☉ Long.	8 22 19 32	♃ H. long. ſub.	0 11 20 36	Tang. 78° 45′ 31″		10,701680
♃ Elong.	+ 3 7 39 26	From long. ☉	8 22 19 32	− 45		
♃ Geo. Long.	11 29 58 58	Commut.	8 10 58 56	33 45 31	tang.	9,825034
Lat. South	1 22 47	Half	4 5 29 28	54 30 32	tang.	10,146874
		Its comp. to 6 ſig.	54 30 32	43 8 54	tang.	9,971908
				97 39 26	♃ Elongation	

Commut.	70 58 56	Ar. Co.	0,02437
Elòngat.	97 39 26	ſin.	9,99611
Inclin.	1 18 58	tang.	8,36125
Latit. ♃	1 22 47 S.	tang.	8,38173

The Column entitled *Æquatio Secularis*, in the Table *Medii motus Jovis ab Æquinoctio in annorum centuriis* (B b b), contains Equations to be added to the mean heliocentric Longitude of *Jupiter* for every hundredth year preceding or following any Radical Year in the Table entitled *Epochæ mediorum motuum Jovis*. And the Column with the ſame Title in the Table *Medii motus Saturni in annorum centuriis* (D d d 4), contains Equations to be ſubtracted from the mean heliocentric Longitude of *Saturn* for every hundredth year preceding or following any Radical Year in the Table intitled *Epochæ mediorum motuum Saturni*.

PRAEFATIO.

PRODEUNT tandem celeberrimi Halleii Solis & Planetarum Tabulæ; typographo quidem Anno 1717 *ab ipſo traditæ, Annóque* 1719 *typis expreſſæ. Deerant tamen tabulæ quædam vulgares, & Præcepta calculi, cùm Auctor Anno* 1720 *Flamſtedii in Obſervatorio regio Succeſſor conſtitutus, earum editionem diſtulit, ut numerorum Lunarium errores ex propriis obſervationibus detegeret, & eorum Abacum ſimul cum tabulis in lucem daret. Hoc ut ab Aſtronomis fieret, diù ſanè cupidiſſimè exoptaverat, ut inde æquationum Lunarium notiorum magnitudines accuratiùs innoteſcerent, & latentes adhuc æquationes detegerentur. Ipſe tandem annum agens ſexageſſimum quartum, ſummo corporis & animi vigore fretus, quo ad id ætatis uſus erat, opus hoc arduum aggreſſus eſt, & præter omnium expectationem abſolvit. Obſervatorium inſtrumentis aſtronomicis omnino deſtitutum acceperat: illa quippe, quibus Flamſtedius uſus eſt, privati juris erant, & hæredes ſequebantur. Anno tamen* 1721 *teleſcopium ad tranſitus ſiderum obſervandos nactus, aſcenſiones Lunæ rectas per annos quatuor continuos diligentiſſimè obſervavit, & cum tabularum ſuarum computo contulit: donec ingens ille Quadrans anno* 1725 *ſumptibus publicis Obſervatorii muro affixus, longitudines Lunæ ex obſervationibus ſupputandi compotem reddidit; à die igitur Dec.* 5*to illius Anni, ad diem Dec.* 27*um anni* 1739 *longitudines Lunæ obſervatæ cum computo tabularum collatæ in obſervationum abaco inveniuntur.*

Si Auctor noſter has ſuas tabulas ipſe edidiſſet, procul dubiò de obſervationibus, quibus ad eas condendas uſus eſt, aliquid dixiſſet; fortaſſe etiam numerorum correctiones quaſdam indicaſſet. Hæc quidem à nobis nequaquàm ſunt expectanda. Pauca tamen monitum Lectorem volumus, quò magis æquum de illis ferat judicium.

Flamſtedii obſervationibus præcipuè uſus eſt noſter, quæ quamvis magnâ diligentiâ factæ fuerunt, & ſummâ fide traditæ, pauciores tamen ſunt, quàm quæ ad numeros Solares ſtabiliendos ſufficiant. Hanc obſervationum inopiam ſæpe cum amicis Halleius, *dum viveret, queſtus eſt. Hinc neque ſpeciem orbitæ terreſtris, neque poſitionem ejus, ſatis accuratè definire valuit; multò minus æquationes Apogæi ſolis, & alias quaſdam, quibus orbita terreſtris minimè immunis eſt, detegere potuit. Hæ nempe non niſi longâ multarum obſervationum ſerie deprehendi & definiri poſſunt: Adde, quod tùm temporis ignorabantur æquationes Aberrationis luminis fixarum, Præceſſionis æquinoctiorum, & Inclinationis axis terræ, quas omnes, mirâ in obſervando induſtriâ pariter ac ſagacitate, primus detexit ſummus ille aſtronomus Rev. Jacobus Bradleius, S.T.P. R.S.S. in Academiâ Oxonienſi Aſtronomiæ Profeſſor Savilianus, & Auctori noſtro in Obſervatorio regio Succeſſor digniſſimus. Hæ æquationes, licet parvæ ſint, errores tamen ſenſibiles in bonas obſervationes inducere valent, & Flamſtedium mirè torſerant. Cùm verò aſtronomia à Sole tota pendeat, ex erroribus ſolaribus errores in omnium Planetarum numeris producantur, neceſſe eſt.*

De Auctoris noſtri labore & ſollertiâ in tabulis lunaribus condendis, judicabunt ii qui obſervationum multitudinem pænè infinitam ad tot æquationum magnitudines definiendas neceſſariam noverint. Et quanto cum candore in hiſce ſuis laboribus cum publico communicandis egerit, exinde patet; quod tabulas haſce tanquam exactas proponere nequaquam cogitavit; quinimò æquationes quaſdam penitùs omittere voluit, quoniam ad ipſas ſatis accuratè determinandas, nondum ſuppeterent obſervationes idoneæ; tum etiam errorum, quos in tabularum computo per octodecim annorum ſeriem obſervatione ſedulâ deprehenderat, abacum confecit, & unà cum tabulis edere decrevit.

Catalogo Britannico ad Lunæ aſcenſiones rectas ex fixarum obſervatione indagandas uſus eſt Noſter, in quo fixarum quarundam loci minus accuratè determinati inveniuntur; &, ſi obſervationum ejus editionem ſperare liceret, fixas illas indicare, ut inde Lunæ loci ab illis derivati corrigerentur, operæ pretium foret. Utinam Auctor, dum viveret, illas edidiſſet; magni enim intereſt, ut Obſervationes aſtronomicæ publici juris fiant, quippe quæ nunquam, ut tabulæ, tractu temporis exoleſcant, ſed ſi diligenter factæ fuerint & bonâ fide traditæ, majorem utilitatem ex antiquitate ducunt: optandum propterea foret, ut ſumptibus publicis ſubindè ederentur obſervationes ab Aſtronomo regio factæ; quo enim magis ſedulus obſervator fuerit, eo magis publici intereſt ut ejus edantur obſervationes,

eòque

eòque minus privati hominis facultatibus impenſæ ad illas edendas neceſſariæ conveniunt.

Numerorum Mercurialium correctiones edidit Auctor in Reg. Societatis Actis philoſoph. N°. 386, ubi Epocham motûs medii hujus planetæ ad annum Julianum 1723 ineuntem ♐ 19°. 9′. 31″ ſtatuit; motúmque medium in annis Julianis centum 2^{s}. 14°. 2′. 13″, & Nodi aſcendentis à primâ ſtellâ Arietis diſtantiam 0°. 15′. 41″ invenit.

Satellitum jovialium tabulas Anno 1718 Halleio tradidit edendas Rev. J. Bradleius. Cum cælo tamen hodie minimè conſentire deprehenduntur; quod Auctori non penitùs inexpectatum accidiſſe patet ex ipſius in eaſdem notis.

Synopſis aſtronomiæ cometicæ, eodem tempore quo tabulæ, typis expreſſa eſt. Obſervationum abacum variis temporibus typographo tradidit Auctor, dum obſervationibus incumberet.

Quid in hiſce edendis à nobis præſtitum ſit, paucis nunc dicendum.

Deerant tabulæ mediarum conjunctionum Lunæ cum Sole, Refractionum, & Longitudinum & Latitudinum Urbium celebriorum; quas omnes ſuis locis inſeruimus.

Tabulas mediarum conjunctionum, & Periodorum lunarium, ſummâ cum humanitate nobiſcum communicavit Rev. J. Bradleius, à celeberrimo dum viveret Aſtronomo Rev. Dno. Poundio artificioſiſſimè conſtructas. Periodorum lunarium tabula, eclipſium revolutionibus indicandis eſt utiliſſima; ideoque abacum eclipſium quæ periodo 223 lunationum ab Anno 1701 ad annum 1718 contigêre, quem cum æquationibus ad revolutionum tempora corrigenda, auctor huic uſui deſtinaverat, & Periodum Plinianam* nuncupaverat, omiſimus; utpote qui minùs accuratè revolutionum tempora repræſentaret, & poſt paucas periodos exactas inutilis fiat. Refractionum tabula ea eſt, quâ ſemper uſus eſt Auctor. Urbium & Locorum eclipſibus antiquis, vel recentiorum obſervationibus præcipuè inſignium Longitudines & Latitudines in tabulam conjecimus: utinam magis fidas obſervationes ad earum pleraſque ſtabiliendas haberemus. Elevationem Poli Obſervatorii Grenovicenſis, quâ Flamſtedius & Halleius uſi ſunt, retinuimus, quamvis minutis aliquot ſecundis verâ minorem eam credamus.

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* Vid. Act. Philoſoph. n. 194. p. 535.

In

In præceptis computi tradendis, methodum, quâ Halleius ipſe tabulis utebatur, ſcrupuloſè ſecuti ſumus, ne errores diverſi ab illis, qui in Abaco inveniuntur, proveniant. Si nempe æquatio Lunæ quarta poſt æquationem centri applicetur, vel rudis illa argumenti ejus correctio, quam in margine paginæ (b) 4 *indicavimus, negligatur, errorum differentia ad minuti unius primi ſemiſſem quandoque aſſurgere poteſt; quod errorum Abacum tabularum correctioni minùs utilem redderet. Hic tamen monendus eſt Lector, quod ex Halleii chartis comperimus, ipſum, in Limbi Lunæ aſcenſionibus rectis ex computo inveniendis, & in centri ejus longitudinibus ex obſervatione indagandis, ſemidiametro Lunæ apparente, veræ ejus ſemidiametri loco conſtanter uſum fuiſſe; indeque factum eſt, ut ab obſervationum initio uſque ad finem ferè anni* 1725, *à novilunio ad plenilunium dum præcedens Lunæ limbus obſervabatur, aſcenſiones ejus rectas ex computo inventas minores quàm oportuit, in Abacum retulerit, & à plenilunio ad novilunium dum limbus ſequens obſervabatur, majores: ab Anno verò* 1725, *longitudines centri Lunæ ex limbi præcedentis obſervationibus deductas, veris ejus longitudinibus majores exhibuerit; & ex limbi ſequentis obſervationibus, minores. Error quidem non magnus eſt, utpote quadrantem minuti unius primi rarò ſuperans; & in computis vulgaribus negligi poteſt, ideóque mentionem ejus nullam in præceptis fecimus. Quicunque verò motus Lunæ medios corrigere, vel æquationes reformare ſuſcipiat, errores in Abaco inventos, exceſſu ſemidiametri Lunæ apparentis ſecundùm Aſcenſionem rectam vel ſecundùm Longitudinem, ſupra ſemidiametrum ejus horizontalem ſecundùm eaſdem menſuras, corrigere debebit.*

Brevitati quantùm licuit ſtuduimus; methodum tamen ad Longitudines terreſtres ex obſervationibus Lunæ inveſtigandas, in navigantium gratiam pluribus exemplis illuſtravimus.

De uſu Tabularum.

MONITUM I.

De Tempore aſtronomico.

TEMPUS illud quod apparens appellatur, à centri Solis per meridianum circulum tranſitu, ad ipſius in eundem meridianum reditum numeratur. In hoc nempe temporis ſpatio naturalis dies abſolvitur. Cùm verò hi dies ſint inter ſe inæquales, motus medii Solis & Planetarum ſatis aptè ad eos accommodari nequeunt. Ad tabulas itaque mediorum motuum condendas, finxêrunt aſtronomi diem medium ſeu æqualem, ad cujus meridiem medios motus in tabulis accommodant. Hunc in ſequentibus Meridiem æquatum vocabimus. Si igitur quæratur locus Solis vel Planetæ ad tempus quodvis apparens datum, convertendum eſt illud in tempus medium, ope Tabularum æquationis temporis (C c 3), & ad hoc tempus, medii motus in Tabulis quærendi ſunt.

MONITUM II.

De Tabulis Epocharum.

Solis & Planetarum motus medii in Epocharum tabulis, ad meridiem æquatum ultimi diei Decembris anni Juliani proximè præteriti exhibentur. Scilicet Anomalia media Solis in tabula Epocharum ad annum 1722, eſt ejus Anomalia media ad meridiem illum fictum diei 31 Decembris Anni 1721. Temporis autem computus ad meridiem Obſervatorii Regii Grenovicenſis accommodatus eſt.

PRÆCEPTA CALCULI SOLIS.

Ad datum tempus Longitudinem Solis veram invenire.

1. E Tabulis *Epocharum* (D d & ſeq.) & *Mediorum motuum Solis* (D d 3 & ſeqq.) colligantur Anomalia media & Longitudo Apogæi Solis ad annum, diem, & partem diei datam.

2. Anomaliæ

2. Anomaliæ Solis mediæ addatur longitudo Apogæi ejus, earum ſumma erit Solis longitudo media.

3. In tab. *Æquationum Solis* (E e 3) inveniatur æquatio anomaliæ Solis mediæ reſpondens. Hæc à Longitudine ejus mediâ ſubducta, vel eidem addita, ſecundùm tabulæ indicem, dabit veram Solis Longitudinem ad tempus medium tabularum.

4. Si tempus datum fuerit apparens, in tabula *Æquationis Temporis* priori (C c 3) quæratur æquatio quæ ad longitudinem Solis veram reſpondet; in altera, vero *Æquationis temporis* Tabula inveniatur ea quæ ad mediam ejus Anomaliam; harum ſumma ſi ambæ ſint addendæ vel ſubtrahendæ; vel differentia ſi altera addenda altera ſubtrahenda fuerit, erit æquatio temporis abſoluta, quâ augeatur vel minuatur tempus apparens datum, & ad tempus ſic correctum denùo quæratur locus Solis. Vel ſi additione aut ſubductione quantitatis motûs medii æquationi temporis abſolutæ proportionalis, corrigatur longitudo Solis vera prius inventa, habebitur quam proximè longitudo ejus vera ad tempus apparens datum. Tabula, quæ (C c 4) habetur, Æquationem temporis abſolutam ad veram Solis Longitudinem exhibet, & ex duabus prioribus componitur. Sed propter motum Apogæi Solis non eſt perpetua.

EXEMPLUM.

Quæritur Longitudo Solis vera ad Meridiem 20 *diei Januarii apparentem Anno* 1722.

In *Epocharum* tabula ad annum 1722 habentur Solis Anomalia media 6^{s}. 12°. 37′. 56″. & Longitudo Apogæi ejus 3^{s}. 8°. 0′. 24″, his addantur motus Anomaliæ mediæ pro diebus Jan. 20, 0^{s}. 19°. 42′. 43″, & Apogæi (cujus motus pro menſe completo habetur in imâ tabulâ) 3″, fit media Solis Anomalia ad meridiem æquatum 20 Januarii 7^{s}. 2°. 20′. 39″, & longitudo Apogæi ejus 3^{s}. 8°. 0′. 27″. quarum ſumma 10^{s}. 10°. 21′. 6″ eſt Solis Longitudo media ad idem tempus. Proſthaphæreſis Solis ad 7^{s}. 2° Anomaliæ mediæ eſt 1°. 2′. 47″, illa vero ad 7^{s}. 3°, eſt 1°. 4′. 31″, earum differentia 1′. 44″. & cum creſcente Solis Anomalia media, creſcat etiam æquatio, æquationi harum minori 1°. 2′. 47″ addatur hujus differentiæ pars proportionalis 36″ & fiet 1°. 3′. 23″ Proſthaphæreſis Solis ad Anomaliam mediam 7^{s}. 2°. 20′. 39″ reſpondens, quæ ſecundum tabulæ indicem Longitudini Solis mediæ addita dabit ♒ 11°. 24′. 29″ Longitudinem ejus veram ad tabularum tempus medium. Quæratur nunc aquatio temporis, cujus pars quæ a Longitudine ſolis pendet invenietur in tabulâ priori ubi 9 m. 52 s. Longitudini ſolis ♒ 11°. 24′ reſpondent; pars altera ad Anomaliam ejus mediam 7^{s}. 2°. 20′ eſt 4 m. 13 s. & cum ex indicibus tabularum ambæ ſint addendæ earum ſumma 14 m. 5 s. eſt æquatio temporis abſoluta, quâ tempus apparens auctum in medium convertetur. Ut habeatur igitur Solis vera Longitudo ad meridiem diei propoſiti apparentem, computus denuò inſtituendus eſt ad 14 m. 5 s. poſt meridiem tabularum æquatum. Vel ſi Longitudini ſupra inventæ addatur arcus 35″ quem Sol ſpatio temporis 14 m. 5 s. medio ſuo motu percurrit, fiet ♒ 11°. 25′. 4″. Longitudo ejus vera meridie apparente 20 Januarii Anno 1722, quam proximè.

Diagramma

Diagramma Calculi.

		☉ Anom. med.				Longit. Apogæi.			
		s	°	′	″	s	°	′	″
Anno	1722	6	12	37	56	3	8	0	24
Jan.	20	0	19	42	43				3
		7	2	20	39	3	8	0	27
		3	8	0	27				
☉ Long. med.		10	10	21	6				
Proſthaphæreſis		+	1	3	23				
☉ Long. vera		♒	11	24	29				
Pro. æq. temp.				+	35				
		♒	11	25	4	Long. ☉ vera Jan. 20, 1722, quam proximè.			

		m.	s.
Æquatio temp. prior	+	9	52
Æquatio temp. altera	+	4	13
Æq. temp. abſoluta	+	14	5

Inventa Solis Longitudine vera, ejus Declinatio in tabula *Declinationum* (B b) habenda eſt, & Aſcenſio recta in tabula *Aſcenſionum rectarum* (B b 2 & ſeqq.)

PRÆCEPTA CALCULI LUNÆ.

Tempus medium Syzygiarum ad Annum & Menſem datum invenire.

1. E Tabulis *Epocharum mediarum Conjunctionum Solis & Lunæ*, (* E e & ſeq.) & e Tabulis *Revolutionum Lunæ ad Solem in menſibus anni communis* (* E e 4) colligantur dies & partes diei ad annum & menſem datum, unà cum Anomaliâ Solis mediâ & mediis Solis diſtantiis ab Apogæo Lunæ & Nodo. In annis Biſſextilibus, poſt Februarium numerus dierum in Tabula menſium uno die minuendus eſt. Si quæratur Oppoſitio, dimidius menſis Synodicus tempori addendus eſt; & motus huic tempori reſpondentes, motibus etiam ſunt addendi.

2. Ope Anomaliæ Solis mediæ capiantur è tabulis *Æquationum annuarum* (L l 3 & ſeq.) Æquationes Apogæi Lunæ & Nodi, quæ ſi ſecundum indices tabularum addendæ ſunt, ſubducantur a mediis Solis ab Apogæo Lunæ & Nodo diſtantiis, & vice verſa; & habebitur ejus diſtantia ab utroque ſemel æquato. Proſthaphæreſis Solis his addita vel ſubducta ſecundum indicem tabulæ dabit Argumentum Lunæ annuum & diſtantiam veram Solis a Nodo ſemel æquato.

3. Diſtantia Solis media ab apogæo Lunæ ſemel æquato, ſubducta a mediâ Solis anomaliâ, eſt in Conjunctionibus argumentum quartæ æquationis Lunæ: verum in Oppoſitionibus huic Argumento, itemque Argumento annuo, addenda ſunt ſex ſigna.

4. In Tabula *Æquationum annuarum Lunæ* (L l 3 & ſeq.) inveniatur æquatio ejus annua mediæ Solis Anomaliæ reſpondens. In tabula *Æquationis ſemeſtris alterius* (M m) ope Solis a Nodo diſtantiæ, inveniatur æquatio Lunæ tertia. In tabula *Æquationis Lunæ quartæ* (ibid.) inveniatur æquatio quarta ad argumentum huic æquationi proprium. In Tabula demum *Æquationum Lunæ in Syzygiis* (O o 3) inveniatur æquatio ad argumentum annuum reſpondens. Harum omnium æquationum ſumma, ubi tempus mediæ ſyzygiæ cum tempore veræ congruit, (quod rarò fit) Solis Proſthaphæreſi æqualis erit. Ubi autem

vera

vera ſyzygia mediam præcedit, æquationum Lunarium ſumma Proſthaphæreſin ſolarem ſuperabit: & ubi media ſyzygia præcedit veram, Solis Proſthaphæreſis ſummam ſuperabit æquationum Lunarium. Differentia igitur inter hanc ſummam & Proſthaphæreſin ſolarem, ope Tabulæ *Motus horarii Lunæ a Sole* (* * E e 2) dabit tempus inter ſyzygiam mediam & veram, quam proximè.

EXEMPLUM I.

Quæritur tempus medium Novilunii menſe Julio Anno 1684.

	Conj. media.	☉ Anom. med.	☉ ab Apog. ☽	☉ à ☊
	D h m s	s ° ′ ″	s ° ′ ″	s ° ′ ″
1684.	6 13 22 38	6 18 57 15	9 19 6 8	6 0 25 39
Jun. Biſſ.	25 4 24 18	5 24 37 56	5 4 54 3	6 4 1 24
Julii	1 17 46 56	0 13 35 11	2 24 0 11	0 4 27 3
Pro. diff. Æq.	+ 8 54 6	—2 24 4 47	+ 4 36	— 2 11
☌ Julii	2 2 41 2	9 19 30 24	2 24 4 47	0 4 24 52
		Arg. 4. Æq.	— 26 47	— 26 47
			2 23 38 0	0 3 58 5
			Arg. Annuum.	☉ à ☊

	° ′ ″
1 Æq. ☽	+ 0 2 41
3a	— 0 0 6
4ta	— 0 2 16
Æq. in ſyz.	— 4 58 24
Summa	— 4 58 5
Proſth. ☉	— 0 26 47
Diff.	4 31 18
Horæ 8 =	4 3 49
	27 29
Min. 54 =	27 26
Sec. 6 =	0 3

Tempus igitur Conjunctionis medium menſe Julio Anno 1684 fuit Die 2. hor. 2. min. 41.

EXEMPLUM II.

Quæritur tempus medium Plenilunii menſe Auguſto Anno 1681.

	Conj. media.	Anom. med.	☉ ab Apog. ☽	☉ a ☊
	D h m s	s ° ′ ″	s ° ′ ″	° s ′ ″
1681.	8 22 12 45	6 22 3 19	1 23 52 52	4 5 37 4
Julii	25 17 8 21	6 23 44 15	6 0 43 3	7 4 41 38
½ Menſ. ſyn.	14 18 22 2	0 14 33 10	0 12 54 30	0 15 20 7
Auguſti	18 9 43 8	2 0 20 44	8 7 30 25	11 25 38 49
Pro. diff. æq.	+ 5 36	—8 7 47 37	+ 17 12	— 8 11
☍ Aug.	18 15 19	5 22 33 7	8 7 47 37	11 25 30 38
		+ 6	— 1 40 2	— 1 40 2
		11 22 33 7	8 6 7 35	11 23 50 36
		Arg. 4tæ Æq.	Arg. Ann.	☉ à ☊
			+ 6	
			2 6 7 35	
			Arg. Æqq. in ſyz. ☍	

	° ′ ″
1 Æq. Lunæ	+ 0 10 9
3a	+ 0 0 10
4ta	— 0 0 19
Æq. in ſyz.	— 4 40 41
Summa	— 4 30 41
Proſth. ☉	— 1 40 2
Diff.	2 50 39
Horæ 5 =	2 32 23
Min. 36 =	18 16

D h m
Tempus igitur Oppoſitionis medium fuit Aug. 18 15 19

Tempora hoc modo inventa paululum a veris ſyzygiarum temporibus aberrabunt, & corrigenda ſunt inveniendo locum Lunæ verum ope *Tabularum Anomaliſticarum* (F f & ſeqq.) per præcepta ſequentia.

Locum Lunæ verum ad datum Conjunctionis vel Oppoſitionis tempus medium invenire.

1. Inveniatur Longitudo Solis vera ad datum tempus, & capiatur Anomalia ejus media ad minuta tertia.

2. In tabulis *Epocharum mediorum motuum Lunæ exiſtente Terra in Aphelio* (F f & ſeq.) inveniantur mediæ Longitudines Lunæ, Apogæi ejus, & Nodi, ad tempus Aphelii proxime præcedens tempus datum.

3. E Tabulis *Mediorum motuum ad gradus Anomaliæ Solis mediæ* (F f 4 & ſeqq.) capiantur motus medii Lunæ, Apogæi ejus, & Nodi, ad mediam Solis anomaliam reſpondentes. Addantur hi Lunæ & Apogæi motus, Longitudinibus prioribus, & ſubducatur ille Nodi a Longitudine priori, & habebimus Lunæ, Apogæi ejus, & Nodi Longitudines ad tempus datum, ſemel æquatas.

4. Diſtantia Solis a Nodo Lunæ ſemel æquato, eſt argumentum tertiæ æquationis Lunæ, quæ *ſemeſtris altera* appellatur (M m). Longitudo Apogæi Solis a Longitudine Apogæi Lunæ ſubducta, argumentum eſt quartæ æquationis in Conjunctionibus (ibid); in Oppoſitionibus autem hoc Argumentum ſex Signis augendum eſt. Argumentum annuum in Conjunctionibus, & idem ſex Signis auctum in Oppoſitionibus eſt argumentum *Æquationum Lunæ in Syzygiis* (O o 3). Hiſce Æquationibus obtinebitur locus Lunæ verus in Orbitâ propriâ.

5. Longitudo Nodi a loco Solis ſupra invento ſubducta, Argumentum Latitudinis in Syzygiis appellatur, cujus ope Latitudo Lunæ, & Reductio loci ejus in orbitâ propriâ ad Eclipticam, in *Tabulâ Latitudinariâ Lunæ in Syzygiis* (O o 4) inveniuntur.

6. Si tempus datum ab illo veræ Syzygiæ aberraverit, ſatis tutò corrigetur ope Tabulæ *Motus horarii Lunæ a Sole* (* * E e 2).

EXEMPLUM I.

Quæritur Locus Lunæ ad tempus Novilunii ſupra inventum Menſ. Jul. die 2. h. 2. min. 41. Anno 1684.

	⊙ An. media.	⊙ Apogæum.
	s ° ′ ″ ‴	s ° ′ ″
B. 1684	6 12 29 28 46	3 7 21 59
Jul. 2	6 1 21 2 3	30
Hor. 2	4 55 41	
Min. 41	1 41 1	
⊙ An. med.	0 13 57 7 31	
Apog.	3 7 22 29	
⊙ Long. med.	3 21 19 36	
Proſtaph.	— 27 29	
⊙ Long.	3 20 52 7	

	☽ ab Æq.	☽ Apog.	☽ ☊
	s ° ′ ″	s ° ′ ″	s ° ′ ″
1684	9 19 19 19	0 25 25 13	3 17 14 22
Anom. ⊙ 13°	5 23 50 19	1 23 46	39 49
57′	12 42 2	6 27	3 4
7″	1 33		
31‴	7		
	3 25 53 20	0 26 55 26	3 16 31 29
Æq. 3a	— 0 7	9 19 32 57	0 5 20 38
4ta	— 2 16	Arg. 4tæ Æq.	⊙ a ☊
Æq. in Syz.	— 4 58 28	2 23 56 41	° ′ ″
		Arg. Ann.	0 22 47
☽	3 20 52 29		Lat. ☽.
⊙	3 20 52 7		
Differentia	0 0 0 22		

Luna igitur conjunctionis punctum præterierat arcu 22 minutorum ſecundorum, & conjunctio vera præceſſit tempus datum 44 minutis ſecundis horariis, circiter; in hoc nempè temporis ſpatio Luna motu ſuo medio a Sole arcum talem percurrit. Conjunctio igitur vera fiebat hor. 2. min. 42. ſec. 26. temporis medii.

Æquatio temporis abſoluta tum temporis fuit 4^m. 58^s. ſubducenda; addatur illa tempori medio hic invento, & habebitur 2^h. 45^m. 24^s. Novilunii veri tempus apparens.

EXEMPLUM II.

Quæritur locus Lunæ verus ad tempus Plenilunii ſupra inventum Aug. 18. 15^h. 19^m. 1681.

	☉ Anom med. s ° ′ ″ ‴	☉ Apog. s ° ′ ″
1681.	6 13 15 29 56	3 7 18 57
Aug. 18.	7 16 41 17 34	38
Hor. 15.	36 57 36	
Min. 19.	46 49	3 7 19 35
☉ An. med.	2 0 34 31 55	
Apog.	3 7 19 35	
☉ Long. med.	5 7 54 7	
Proſtaph.	— 1 40 16	
☉ Long.	5 6 13 51	

	☽ Long. med. s ° ′ ″	☽ Apog. s ° ′ ″	☽ ☊ s ° ′ ″
1681	8 10 54 55	8 23 20 30	5 15 16 0
Sig. 2.	2 22 18 8	6 29 48	3 5 16
Min. 34.	7 34 33	3 51	1 50
Sec. 31. tert. 55	7 7	4	2
	11 10 54 43	8 29 54 13	5 12 8 52
Æq. 3ta	+ 0 10		5 24 4 40
Æq. 4ta	— 0 19		Arg. Lat in
Æq. in Syz.	— 4 41 2		Syz. ☋.
			0 31 2
☽	11 6 13 32		Lat. ☽
☉	5 6 13 51		
Diſtantia ☽ à ☉	6 0 0 19		

Luna igitur ad tempus datum diſtabat ab oppoſitione arcu 19″, quem motu ſuo medio a Sole, tempore 38 minutorum ſecundorum percurrit. Fiebat itaque Oppoſitio vera 15^h. 19^m. 38^s temporis medii, quàm proximè.

Tempus medium Syzygiarum ad Annum & Menſem ante Æram Chriſtianam datum invenire.

1. Centuriæ decimæ octavæ nunc currentis, iſtum Annum ſelige, qui, ſi annis ante Chriſtum datis, uno dempto, addatur, integrum efficiet centuriarum numerum.

2. Quæratur hic numerus in tabula pro *Centuriis annorum* (* * E e) & tempora & motus huic reſpondentes, a temporibus & motibus, anno iſti Centuriæ decimæ octavæ in Epocharum tabulâ (* E e & ſeqq.) reſpondentibus ſubducantur; & obtinebitur tempus medium primæ conjunctionis mediæ in anno ante Chriſtum dato, cum motibus eidem reſpondentibus. Quibus datis invenietur tempus Conjunctionis vel Oppoſitionis in dato menſe, per præcepta ſupra tradita.

Si Annus in Epocharum tabulâ inventus Biſſextilis fuerit, Annus etiam datus Biſſextilis erat.

EX-

EXEMPLUM.

Quæritur tempus medium Conjunctionis Lunæ cum Sole in menſe Maio, anno ante Chriſtum 585.

Annis 584
Addantur 1716

Fiunt 2300 Integer Centuriarum numerus.

	D h m s	☉ Anom. med.	☉ ab Apog. ☽	☉ à ☊		
		s ° ′ ″	s ° ′ ″	s ° ′ ″		° ′ ″
1716.	12 16 6 46	6 24 41 0	2 12 33 1	2 25 57 37		
2300 ſubd.	11 5 57 54	11 19 46 54	1 5 58 33	7 25 26 59		
	1 10 8 52	7 4 54 6	1 6 34 28	7 0 30 38	1 Æq. Lunæ	+ 0 0 5
Maii Biſſ.	26 15 40 15	4 25 31 37	4 9 5 2	5 3 21 10	3a	— 0 0 6
					4ta	— 0 0 37
	28 1 49 7	0 0 25 43	5 15 39 30	0 3 51 48	Æq. in Syzygiis	— 1 8 35
	+ 2 14 35	6 14 46 4	+ 9	— 4		
			— 51	— 51	Summa	— 1 9 13
6 Maij	28 4 3 42	Arg. 4tæ Æq.			☉ Proſtaph.	— 0 0 51
			5 15 38 48	0 3 50 53		
			Arg. Annuum.	☉ a ☊		1 8 22
					Horæ 2	1 0 57
					Min. 14. ſec. 35.	0 7 25

Simili modo invenietur locus Lunæ verus ex tabulis anomaliſticis; dum verò motus cæteri pro centuriis annorum ſubducantur, Longitudo Nodi pro Annorum centuriis, Epochali Longitudini centuriæ decimæ octavæ addenda eſt. Ut in Exemplo ſequenti.

EXEMPLUM.

Quæritur locus Lunæ verus ad tempus medium ſuperiori exemplo inventum.

	☉ Anom. med.	☉ Apog.	☽ Long. med.	☽ Apog.	☽ ☊	
	s ° ′ ″ ‴	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′ ″	
1716.	6 12 11 41 41	3 7 54 20	7 8 59 37	8 7 35 37	6 28 17 2	
2300 ſub.	11 8 41 42 40	1 8 45 33	5 15 8 35	11 23 42 30	6 27 25 50	addend.
	7 3 29 59 1	1 29 8 47	1 23 51 2	8 13 53 7	1 25 42 52	
Maii 28 B	4 26 51 16 20	25				
Hor. 4	9 51 22					
Min. 3. 42ˢ.	9 5	☉ Anom 31′	6 54 26	3 30	1 40	
		15″ 48‴	3 31	2	1	
	0 0 31 15 48					
☉ Apog.	1 29 9 12		2 0 48 59	8 13 56 39	1 25 41 11	
		Æq. 3a	— 0 0 6	5 15 42 47		
	1 29 40 28	4ta	— 0 0 37	Arg. Annuum	☽ Ap.	8 13 56 39
Proſth.	— 1 2	Æq. in Syz.	— 1 8 15		☉ Ap.	1 29 9 12
☉	1 29 39 26	☽	1 29 40 1			6 14 47 27
		☉	1 29 39 26			Arg. 4tæ Æq.
		Diff.	0 0 0 35			

Luna igitur præterierat Conjunctionem arcu 35″.

Ad datum quodvis tempus Locum Lunæ invenire.

1. Inveniatur ad tempus datum Longitudo Solis vera.

2. E Tabulis *Epocharum Mediorum motuum Lunæ*, *Apogæi ejus & Nodi Annis Julianis ineuntibus* (H h 4 & ſeq) & e tabulis *Mediorum motuum ad dies menſium, &c.* (I i 3 & ſeqq), colligantur ad tempus medium datum, Longitudines, Lunæ, Apogæi ejus, & Nodi, mediæ. Et notandum eſt, quod medii motus Nodi pro menſibus, diebus, & diei partibus, quibus tempus datum anni ineuntis Epocham ſuperat, ſubducendi ſunt ab ejus Longitudine in Epocharum tabulâ inventâ.

3. In tabulis *Æquationum annuarum* (L l 3 & ſeq.) inveniantur æquationes Lunæ, Apogæi ejus, & Nodi, mediæ Solis Anomaliæ reſpondentes, & mediis eorum Longitudinibus addantur, vel ab iis ſubducantur, ſecundum tabularum indices.

4. Argumentum ſecundæ Æquationis Lunæ (M m), (quæ & *Prima ſemeſtris* vocatur) eſt diſtantia Solis ab Apogæo Lunæ, & Argumentum annuum appellatur.

5. Argumentum tertiæ Æquationis (ibid.) (quæ *Semeſtris altera* nuncupatur) eſt Solis a Nodo Lunæ diſtantia.

6. Pro Argumento *quartæ Æquationis* (ibid) Longitudo Apogæi Solis ad Argumentum Annuum addenda, & hæc ſumma a Lunæ Longitudine jam ter æquatâ ſubducenda. Cum vero hæc æquatio ſit ſecundum Neutonum ſexta, augeri vel minui debet ejus argumentum, æquatione Centri Lunæ. *

7. In tabulâ *Æquationum Apogæi & Excentricitatum Orbis Lunæ* (M m 2 & ſeqq) habentur ad Argumentum annuum reſpondentes, Æquatio ſecunda Apogæi Lunæ, Orbitæ ejus excentricitas, & Logarithmus pro Æquatione Centri Lunæ.

8. Longitudo Apogæi Lunæ iterum æquata, ſubducta a Lunæ Longitudine jam quartum æquatâ, dat ejus Anomaliam mediam; quæ quando ſex Signis minor eſt, Argumentum erit *Tabulæ pro expediendo calculo Centri Lunæ* (N n & ſeqq.) ſi vero ſex Signa ſuperaverit, Complemento ejus ad Signa duodecem utendum eſt. Ex hac tabulâ, ad hoc Argumentum, tum etiam ad Logarithmum pro æquatione Centri Lunæ reſpondens, capiatur æquatio; quâ augeatur vel minuatur (ſecundum indicem tabulæ) dimidius angulus mediæ Anomaliæ (vel ejus complementi ad Signa duodecem); hujus anguli ſic correcti tangens logarithmica, logarithmo pro invenienda æquatione Centri Lunæ addita, dabit tangentem logarithmicam dimidii Anguli Anomaliæ veræ. Et differentia inter mediam & veram Anomaliam eſt æquatio Centri; ſubducenda quando Lunæ Anomalia media ſex Signa non ſuperat, ſi ſuperet addenda.

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* Ut corrigatur Argumentum quartæ Æquationis, ſubducatur Longitudo Apogæi ſemel æquata a Lunæ Longitudine, & capiatur reſiduum pro Anomaliâ Lunæ mediâ. In tabula *Æquationis Apogæi et Exentricitatis Lunæ* (M m 2 & ſeqq) quæratur *Logarithmus pro æquatione Centri Lunæ*, qui Tangenti logarithmicæ Anguli dimidii Anomaliæ Lunæ mediæ addatur. Summa erit tangens Anguli, cujus duplum ab angulo Anomaliæ mediæ ſubductum, dabit Argumenti hujus correctionem. Argumento ſubducenda ſi Anomalia Lunæ media ſex Signis minor fuerit, eidem vero addenda ſi totidem Signa ſuperaverit. In Exemplo ſequente

	s	°	′		°	′	
Pro Lunæ Anomalia media habebitur	4	18	48	ejus dim.	69	24	10.4249
Log. pro æquatione Centri Lunæ	s	°	′				9.9422
Angulus cujus duplum eſt	4	13	32		66	46	10.3671
Correctio detrahenda	—	5	16				

9. A Longitudine Lunæ jam quinquies æquatâ ſubducatur Solis Longitudo vera, & in tabulâ *Variationis ſive Reflectionis Lunæ* (N n 4) inveniatur huic argumento reſpondens, Variatio Lunæ ad mediam Terræ a Sole diſtantiam; hujus Logarithmo logiſt. addatur Logarithmus in tabulâ *Logarithmorum pro correctione Variationis* (ibid) Anomaliæ mediæ Solis repſondens; eorum ſumma erit Logarithmus logiſt. Variationis veræ: quâ aucta vel diminuta (ſecundum tabulæ indicem) Longitudo Lunæ quintùm æquata, fiet Longitudo ejus vera in Orbitâ propriâ.

10. In *Tabulâ pro computo Latitudinis Lunæ* (O o) inveniantur, Æquatio Nodi ſecunda, Sinus maximæ inclinationis logarithmicus & Reductio maxima; omnes ad diſtantiam Solis a Nodo medio reſpondentes. Longitudo Nodi jam ſemel æquata, hâc demum Æquatione aucta vel diminuta, ſecundùm indicem tabulæ, ſubducta a verâ Lunæ Longitudine in Orbitâ propriâ Argumentum Latitudinis appellatur.

Sinui logarithmico maximæ inclinationis addatur ſinus logarithmicus Argumenti Latitudinis; ſumma, dempto radio, eſt Latitudinis Lunæ ſinus logarithmicus; quæ cum argumentum Latitudinis minus ſex Signis fuerit, Borealis eſt; Auſtralis autem, cum totidem Signa ſuperaverit.

Logarithmo logiſtico maximæ Reductionis, addatur Sinûs dupli argumenti Latitudinis complementum arithmeticum, eorum ſumma eſt Logarithmus logiſticus Reductionis veræ, quæ a Longitudine Lunæ in orbitâ propriâ, in primo & tertio Argumenti Latitudinis quadrante ſubducta, vel eidem in ſecundo & quarto addita, dabit Lunæ Longitudinem Eclipticam.

11. In tabulâ *Parallaxium Lunæ horizontalium in Syzygiis* (O o 2) inveniatur Parallaxis tam Anomaliæ Lunæ veræ, quàm Orbitæ ſuæ excentricitati reſpondens, hujus Logarithmus logiſticus, Logarithmo e *Tabulâ pro Parallaxi extra Syzygias ad diſtantiam Lunæ a Syzygiâ propiore* (ibid.) addatur; eorum ſumma eſt Logarithmus logiſticus Parallaxis Lunæ horizontalis veræ.

12. Parallaxis Lunæ horizontalis, eſt ad ejus Diametrum, in ratione 60 ad 33. Addendo igitur Logarithmum logiſt. minutorum 33 (2596) Logarithmo logiſtico Parallaxis Lunæ horizontalis ſupra inventæ, fit Logarithmus logiſticus diametri Lunæ horizontalis.

Lunæ Diameter horizontalis aucta in ratione coſinûs Latitudinis Lunæ ad Radium menſuram dabit Diametri ejus veræ ſecundum Longitudinem. Si verò in ratione coſinûs Declinationis ad Radium augeatur, ejuſdem menſuram dabit ſecundùm Aſcenſionem rectam.

Diameter Lunæ horizontalis ope tabulæ *Aug. Diam. Lunæ* (O o 5) pro diſtantiâ Lunæ a vertice aucta, (prout Luna magis vel minus ab Apogæo ſuo diſtaverit) fiet Diameter ejus apparens; quæ aucta in ratione coſinûs Latitudinis ad Radium menſuram dabit Diametri apparentis ſecundùm Longitudinem; vel ſi in ratione coſinûs Declinationis ad Radium augeatur, ejuſdem menſuram ſecundùm Aſcenſionem rectam dabit.

EXEMPLUM.

Anno 1725 Dec. 5to, præcedens Lunæ Limbus, obſervante Halleio Meridianum Obſervatorii Grenovicenſis tranſiit 9^h. 8^m. 5^s temporis medii, cum Aſcenſione rectâ 42°. 26′. 15″, & Limbi inferioris a vertice diſtantiâ 34°. 9′. 15.

Quæritur locus Lunæ ad idem tempus ſecundùm Tabulas.

	⊙ Anom. med.	⊙ Apogæum.	⊙ Long. vera.
	s ° ′ ″	s ° ′ ″	s ° ′ ″
	5 17 20 40	3 8 4 22	8 24 59 2

	☽ Long. med.	☽ Apogæum.	☊ Lunæ.
	s ° ′ ″	s ° ′ ″	s ° ′ ″
1725	8 19 36 54	7 24 56 18	1 13 11 2
Dec. 5.	4 26 47 52	1 7 46 2	17 57 7
Hor. 9	4 56 28	2 30	1 12
Min. 8. ſec. 5.	4 26	2	1
	1 21 25 40	9 2 44 52	0 25 12 42
Æqq. annuæ	+ 2 38	— 4 28	+ 2 7
	1 21 28 18	9 2 40 24	0 25 14 49
Æq. 2 a + 1′ 0″ 3 a — 0 41 4 a — 1 41	— 1 22	— 2 41 0	+ 1 19 7
	1 21 26 56	8 29 59 24	0 26 33 56
Æq. Centri	— 5 3 56	4 21 27 32 ☽ Anom. med.	1 15 46 45 ☽
	1 16 23 0		0 19 12 49 Arg. Lat.
† Variatio	— 36 15	½ Anom med. ° ′ ″	
	1 15 46 45	70 43 46	
‡ Reductio	— 4 11	— 1 47	
☽ Long. Eclipt	♉ 15 42 34	70 41 59	tan 10.455683
* ☽ Lat. Bor.	1 39 57	Log. pro Æq. centri	9.942214
		68 11 48	tan 10.397897
		4^s 16 23 36	ejus duplum
		5 3 56	Æq. Centri ſubd.

Æqq. Argumenta.

s ° ′	
5 17 20.	⊙ An. med.
Arg. Æqq. Annuarum.	
8 24 59 2	⊙
9 2 40 24	☽ Apog.
11 22 18 38	
Arg. Annuum.	
Excentr. 066429	
8 24 59	⊙
0 25 15	☊
7 29 44	
Arg. 3æ Æq.	
3 8 4	⊙ Apog.
11 22 18	Arg. Ann.
3 0 22	
1 21 28	☽
10 21 6	
— 5 16	correctio
10 15 50	
Arg. 4tæ Æq.	
1 16 23	☽
8 24 59	⊙
4 21 24	☽ à ⊙
Arg. Variationis.	

† ☽ Variatio ſimplex — 34′ 18″ L L 2430
Correctio è tabulâ 9.9758
☽ Variatio vera — 36 15 L L 2188

‡ Reductio max. — 6′ 44″ L L 9499
S. dupl. Arg. Lat. C A 2065
Red. vera — 4 11 L L 11564

* Inclin. ſin Log. 8 94616
Arg. Lat. ſ. Log. 9.51732
☽ Lat. bor. 1° 39′ 57″ 8.46348

Inveniatur nunc ex obſervatione locus Lunæ verus.

			°	′	″
Parallaxis Lunæ horizontalis in Syzygiis ad Anomaliam Lunæ veram 4^s. 16°. 23′ & ad excentricitatem 0664 eſt 60′. 3″ cujus Logarithmus logiſticus eſt	— 3				
Ad Diſtantiam ☽ à ☉ 4^s. 21°. 24′ (vel 1^s. 8°. 36′ ab Oppoſitione) logarithmus pro Parallaxi extra Syzygias eſt	24				
Horum ſumma eſt Log. log. Parallaxis horizontalis veræ	21	=	0	59	43
Cui addendo Logarithmum conſtantem	2596				
habemus Log. log. Diametri Lunæ horizontalis	2617	=	0	32	50
Lunæ limbi inferioris diſtantia a vertice obſervata erat			34	9	15
addatur Refractio			+	0	36
& habebitur diſtantia ejus à vertice a Refractione purgata			34	9	51
logarithmo log. Parallaxis horizontalis veræ, ſupra invento	21				
addatur compl. arith. ſinûs diſtantiæ limbi Lunæ a vertice correctæ	2506				
ſumma erit log. log. Parallaxis altitudinis Limbi Lunæ * inferioris	2527	=	0	33	32
hæc a diſtantiâ limbi Lunæ a vertice correctâ, ſubducta, dabit veram ejus a vertice diſtantiam			33	36	19
ſubducatur etiam ſemidiameter Lunæ horizontalis				16	25
reſiduum erit vera centri Lunæ a vertice diſtantia			33	19	34
huic addatur Latitudinis Obſervatorii complementum			38	31	30
& habebitur centri Lunæ vera a Polo boreo diſtantia			71	51	24
Logarithmo log. diametri Lunæ horizontalis	2617				
addatur coſinus log. Declinationis Lunæ	9778				
ſumma erit Log. log. veræ diametri Lunæ ſecundùm Aſcenſionem rectam	2395	=	0	34	34
Aſcenſioni rectæ limbi Lunæ præcedentis obſervatæ			42	26	15
addatur ſemidiameter Lunæ vera ſecundùm Aſcenſionem rectam			0	17	17
ſumma erit Aſcenſio recta centri Lunæ vera			42	43	32

Aſcenſione Lunæ rectâ 42°. 43′. 32″, & diſtantiâ ejus a Polo Boreo 71°. 51′. 24″ datis, invenietur ejus Longitudo Ecliptica ♉ 15°. 42′. 12″, cum Latitudine Boreâ 1°. 38′. 37″.

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* Cum Parallaxis altitudinis ſit in ratione ſinûs diſtantiæ a Vertice apparentis; ſi diſtantia apparens non detur, augenda erit diſtantia vera ex conjecturâ, & inde quærenda Parallaxis altitudinis. Nempe ſi diſtantia a vertice vera pro apparente ſumatur, & inde parallaxis altitudinis inveniatur, diſtantia illa vera hac Parallaxi aucta pro apparente uſurpari poteſt, & Parallaxis inde inventa, a verâ quàm minimùm aberrabit.

De-

De Lunæ computo corrigendo.

Sicubi Tabulæ a cælo longiùs aberrent, corriguntur ope Errorum Abaci, qui in *Obſervationum tabulis* (☾ b & ſeqq) habetur. Errores enim ejuſdem ferè magnitudinis poſt exactum annorum 18 cum diebus 11. 7^{h}. 43^{m}. 20^{s} Periodum recurrent.

Ut igitur invenietur dies in Errorum Abaco tempori culibet dato reſpondens addatur hæc Periodus (vel ejus multiplum, vel Periodus Lunationum 111, quæ in tabulâ *Periodûm Lunarium* † (* * E e 4) habentur) tempori dato, vel ab eodem ſubducatur, prout tempus illud Annos in Obſervationum tabulis præceſſerit vel ſecutum fuerit, ut ſumma vel reſiduum incidat in annum in illis tabulis inveniendum; & ad diem hoc modo inventum, habebitur in Errorum Abaco, error computi ad tempus datum. Et notandum eſt, quod harum Periodûm illæ quæ diverſum annorum biſſextilium numerum admittunt, tempora periodica unius diei ſpatio ſeriùs quam oportet quandoque repræſentabunt. Periodus ſcilicet menſium 223 Synodicorum, eſt Annorum 18 cum diebus 11. 7^{h}. 43^{m} 20^{s}, quando non plures 4 Annis biſſextilibus in ea numerantur; verùm ubi 5 biſſextiles in ſe continet, complebitur in Annis 18. 10^{d}. 7^{h}. 43^{m}. 20^{s}.

EXEMPLUM.

Quæritur tempus tranſitûs limbi Lunæ ſequentis per Meridianum Grenovicenſem Die 28*vo. Decembris, Anno* 1745.

Subductis a dato tempore annis 18 cum diebus 10 (quinque enim anni biſſextiles in hac Periodo numerantur) habebitur Decembris dies 18vus Anni 1727, ad quem diem in Obſervationum tabulâ invenietur tempus tranſitûs limbi lunæ obſervati 13^{h}. 45^{m}. 21^{s}. Anni 18 cum diebus 10 a plenâ Perodio 7^{h}. 43^{m}. 20^{s} deficiunt; et in hoc temporis ſpatio, Luna motu ſuo medio arcum 4°. 14′. 22″ perrcurrit, qui 16^{m}. 55^{s} in meridiano tranſeundo inſumit. Subducantur igitur 16^{m}. 55^{s} a tempore obſervationis, & habebitur 13^{h}. 28^{m}. 26^{s} tempus tranſitûs limbi Lunæ ſequentis per Meridianum Grenovicenſem die Decembris 28vo Anni 1745.

Ad hoc tempus Longitudo Lunæ ecliptica ſecundùm tabulas eſt ♌ 6°. 43′. 8″. Latitudo ejus borea 3°. 49′. 24″.

In errorum Abaco die Dec. 18. Anni 1727, invenietur error computi — 3′. 1″, quo Longitudo Lunæ ſupra inventa aucta, fiet ejus Longitudo correcta ad tempus datum ♌ 6°. 46′. 9″.

	°	′	″	°	′	″
Hinc centri Lunæ Aſcenſio recta				130	12	38
quæ ſemidiametro ejus verâ ſecundùm Aſcenſ. rectam aucta					17	18
fiet limbi ejus ſequentis Aſcenſio recta				130	29	56
Solis Longitudini mediæ ad datum tempus	288	25	2			
addatur arcus dato tempori medio 13^{h}. 28^{m}. 26^{s} proportionalis	202	6	30			
horum ſumma eſt Meridiani Aſcenſio recta				130	31	32
Meridianus igitur limbum Lunæ ſequentem prætergreſſus eſt arcu				0	1	36

qui

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† Hæc tabula Periodos etiam Nodi complectitur, et utilis eſt ad Eclipſium revolutiones inveſtigandas.

qui tempore 6½ a Meridiano percurritur, quæ a dato tempore ſubducta, tempus tranſitûs limbi Lunæ ſequentis darent, ſi Aſcenſio ejus recta cum quâ Meridianum tranſiit immutata manſiſſit; Luna verò eam 4″ ferè minutis ſecundis interea auxerat, quibus arcus ſupra inventus auctus fiet 1′. 40″, & limbi tranſitus ex tempore arcûs hujus deſcriptionis æſtimandus eſt. Meridianus arcum 1′. 40″, tempore 7^{s} ferè, percurrit. Subducantur igitur 7^{s} a tempore dato & habebitur tempus medium tranſitûs Limbi Lunæ ſequentis 13^{h}. 28^{m}. 19^{s}. quem Rev. Dnus Bradleius ad 13^{h}. 28^{m}. 21^{s}. obſervabat.

De Longitudinum terreſtrium inveſtigatione ex obſervationibus Lunæ.

Obſervationes huic operi maximè idoneæ, ſunt, Appulſus Lunæ ad Stellas fixas; vel, diſtantia ejus a fixâ quæ non longe diſtat à parallelo Latitudinis in quo Luna tum verſatur; vel denique, Lunæ a Sole diſtantia in primo vel ultimo menſis quadrante. Ex qualibet harum Obſervationum, datâ loci ubi illa facta fuerit Latitudine, Meridiani ignoti a Grenovicenſi diſtantia inveſtigari poteſt. Invento enim tempore quod Grenovici numerabatur cum Obſervatio facta fuit, ex temporum differentiâ dabitur Meridianorum diſtantia.

EXEMPLUM.

Anno 1737. Jan. 1. 6^{h}. 4^{m}. 30^{s} temporis apparentis (quod in medium converſum fit 6^{h}. 13^{m}. 40^{s}) ſub elevatione Poli borei 65°. 50′. 50″, Luna ſtellam γ Tauri occultabat. Quæritur Meridiani ubi obſervatio fiebat a Grenovicenſi diſtantia.

Dies hic in obſervationum Tabulis non invenitur; ſubductâ igitur à dato tempore Lunationum 111 Periodo, habebitur Jan. 11, Anni 1728; ad quem diem errorum Abacus 1′. 18″ Longitudini tabularum addenda indicat.

Longitudo Stellæ tum temporis, fuit ſecundùm Catalogum Britannicum ♊ 2°. 7′. 0″, Latitudo ejus Auſtralis 5°. 46′. 22″.

Pro tempore Grenovicenſi capiatur conjectura ex Ephemeridibus quibuſlibet Londinenſibus; hæ conjunctionem Lunæ cum ſtellâ ad horam circiter 5tam pomeridianam retulerunt. Longitudo Lunæ ad hoc tempus è tabulis eſt ♊ 2°. 1′. 20″, quæ additione 1′. 18″ correcta, fit ♊ 2°. 2′. 38″. Latitudo ejus auſtralis 4°. 50′. 18″.

					°	′	″
Parallaxis Lunæ horizontalis vera ——— — —					0	55	41
Longitudini Solis mediæ ad idem tempus	292	11	24				
addatur tempus obſervationis in Merid. ignoto 6^{h}. 13^{m}. 40^{s}	93	25	0				
fit Meridiani ignoti Aſcenſio recta ——— — —					25	36	24
Gradus Ecliptici nonageſſimus ſub. elev. Poli 65° 50′. 50″				♉	24	56	24
Angulus Lunæ parallacticus ——— ——— —					5	33	2

	°	′	″	°	′	″
Vera Lunæ à vertice diſtantia	55	12	54			
Augeatur ex conjecturâ Parallaxi altitudinis	+	46				
fiet Lunæ a vertice diſtantia apparens	55	59	00			
Lunæ Semidiameter apparens				0	15	28
Parallaxis altitudinis vera				0	46	10
* Parallaxis Longitudinis, veræ Longitudini addenda				0	4	28
Parrallaxis Latitudinis, veræ Latitudini addenda				0	45	57

Locus igitur Centri Lunæ apparens fuit ♊ 2°. 7′. 6″, cum Latitudine auſtrali 5°. 36′. 15″.

Cum vero Lunæ Longitudo viſa, Longitudinem Stellæ 6″ minutis ſecundis ſuperet, Stellæ occultatio tempus ex Ephemeride aſſumptum præceſſit.

Ad tempus corrigendum, convertatur Lunæ Semidiameter apparens 15′. 28″, ac etiam diſtantia apparens Centri ejus a Stellâ ſecundùm Latitudinem 10′. 7″, in minuta ſecunda, & differentia quadratorum harum quantitatum erit 492735″, cujus Radix quadrata 702″ = 11′. 42″, non multum aberrabit à Centri Lunæ diſtantiâ apparente a Stellâ, ſecundum Longitudinem tempore occultationis. augeatur hæc diſtantia 6″ illis minutis ſecundis, quibus Centri Lunæ longitudo viſa Stellæ Longitudinem, ſecundum computum præcedentem, ſuperabat; & è tabulis mediorum motuum Lunæ quæratur tempus quo Luna arcum 11′. 48″. percurrit, quod 21ᵐ. 30ˢ invenietur: quibus a tempore priori 5ʰ. ſubductis, inſtituatur computus ad tempus ſic correctum 4ʰ. 38ᵐ. 30ˢ.

Ad hoc tempus Lunæ longitudo correcta eſt ♊ 1°. 51′. 13″, et latitudo ejus auſtralis 4°. 49′. 59″.

		°	′	″
Meridiani ignoti Aſcenſio recta		25	35	31
Gradus Ecliptici nonageſſimus	♉	24	55	57
Angulus Lunæ Parallacticus		5	24	32
Parallaxis longitudinis, addenda		0	4	21
Parallaxis latitudinis, addenda		0	45	57
Stellæ à centro Lunæ diſtantia apparens ſecundùm Longitudinem		0	11	26
eorundum diſtantia apparens, ſecundùm Latitudinem		0	10	26

Convertatur nunc Lunæ ſemidiameter apparens 15′. 28″, ac etiam differentia Latitudinum apparens 10′. 26, in minuta ſecunda. Differentia quadratorum harum quantitatum erit quadratum diſtantiæ apparentis Stellæ, in minutis ſecundis,

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* De Parallaxibus hæc ſunt notanda.

Dum Luna in partibus cæli ad orientem gradûs Ecliptici nonageſſimi verſatur, Longitudo ejus apparens veram ſuperat; dum vero partes occidentales occupat, Longitudo apparens a verâ deficit.

Simile obtinet in Aſenſionibus rectis, prout Luna ad orientem vel ad occidentem Meridiani circuli per Loci verticem tranſeuntis, ſita fuerit.

Quando angulus Lunæ parallacticus à circulo verticali cum circulo Latitudinis factus, major eſt recto verſus Polum Ecliptici a quo Latitudo Lunæ nomen accipit, Latitudo viſa veram ſuperat, & è contra.

Cum angulus Lunæ parallacticus a circulo verticali cum circulo Declinationis factus, major eſt recto verſus polum Æquatoris cui Luna propior eſt, Declinatio viſa veram ſuperat, & vice verſa.

cundis, a circulo Latitudinis per centrum Lunæ tranſeuntis 11′. 25″; quæ in ratione coſinûs latitudinis Stellæ ad Radium aucta fiet 11′. 28½″ Stellæ diſtantia apparens a Lunæ centro ſecundùm Longitudinem, tempore occultationis. Hæc ſuperat diſtantiam ſupra inventam 2½″, & tempus adhuc minuendum eſt.

Longitudo Lunæ apparens tempore ex Ephemeride aſſumpto (ſcil. 5^{h}) fuit ♊ 2°. 7′. 6″, illa verò tempore correcto ($4^{h}.\ 38^{m}.\ 30^{s}$) fuit ♊ 1°. 55′. 34″, harum differentia 11′. 32″, eſt motus Lunæ viſibilis ſpatio temporis $21^{m}.\ 30^{s}$. et

$$\text{Ut } 11'.\ 32'' : 2\tfrac{1}{2}'' :: 21^{m}.\ 30^{s} : 5^{s} \text{—.}$$

demptis igitur 5^{s} de $4^{h}.\ 38^{m}.\ 30^{s}$, habebitur $4^{h}.\ 38^{m}.\ 25^{s}$ tempus medium Grenovicenſe quando occultatio ſub Meridiano ignoto obſervabatur. Subducatur hoc tempus a dato obſervationis tempore medio $6^{h}.\ 13^{m}.\ 40^{s}$, reſiduum $1^{h}.\ 35^{m}.\ 15^{s}$, dabit Meridianorum diſtantiam 23°. 48′. 45″.

Quoniam verò ſtellarum occultationes minùs frequenter navigantibus ſint obſervabiles, illorum uſui magis commoda videtur diſtantia Lunæ a Stellâ fixâ, cujus Latitudo non nimiùm diverſa fuerit ab illâ, quam tempore obſervationis habuerit Luna.

Meridianorum diſtantia quæſita intra tres vel quatuor gradus, ex diariis nauticis plerumque innoteſcit, et conjectura inde capi poteſt pro tempore quod Grenovici numerabatur cum obſervatio facta fuit: Ad quod tempus inveniantur è tabulis Longitudo & Latitudo Lunæ; & Longitudine ex errorum Abaco correctâ, inveniantur etiam Aſcenſio ejus recta & diſtantia a Polo; & inde angulus azimuthalis, cum verâ ejus a vertice diſtantiâ, quæ Parallaxi & Refractione corrigatur in viſam. Ad idem tempus inveniatur angulus Stellæ azimuthalis, & diſtantia ejus a vertice, quæ etiam refractione minuatur.

Hiſce inventis dabuntur in triangulo Sphærico duo latera, Lunæ ſcilicet & Stellæ a vertice diſtantiæ viſibiles, cum angulo azimuthali inter Lunæ centrum & Stellam, ab illis comprehenſo, ad latus tertium inveniendum; quod Lunæ ſemidiametro diminutum vel auctum, prout limbus ejus propior vel remotior obſervabatur, arcui obſervato æquale erit, ſi tempus Grenovicenſe rectè ſumebatur; ſin minùs, ad tempus ex conjecturâ correctum computus denuò inſtituendus eſt, & ex collatis erroribus ſatis tutò corrigetur tempus, & inde habebitur Meridianorum diſtantia.

EXEMPLUM.

Anno 1725. Dec. 10. $11^{h}.\ 14^{m}$ temporis apparentis, medii verò $11^{h}.\ 13^{m}$, ad occidentem meridiani Grenovicenſis, ſub Poli borei elevatione gr. 40, ſtella γ Leonis a limbo Lunæ propiore 20°. 50′ diſtare obſervabatur. Quæritur Meridiani ignoti à Grenovicenſi diſtantia.

Sumatur ex conjecturâ temporum differentia $2^{h}.\ 8^{m}$, quæ tempori obſervationis addita, dabit $13^{h}.\ 21^{m}$ pro tempore medio Grenovici numerato cum obſervatio facta fuit.

1725.

		°	′	″		°	′	″
1725. Dec. 10. 13^{h}. 21^{m} Longitudo Lunæ e tabulis	♌	4	4	2				
Correctio ex errorum Abaco			+	48				
Longitudo Lunæ vera					♌	4	4	50
Latitudo ejus borea						5	59	47
Parallaxis Lunæ horizontalis vera						1	0	18
Lunæ Aſcenſio recta						127	42	28
ejus a Polo boreo diſtantia						65	52	43
Meridiani ignoti Aſcenſio recta						78	46	8
Angulus Azimuthalis Lunæ cum Meridiano circulo						84	0	10
Diſtantia Lunæ a vertice		43	47	7				
Parallaxis altitudinis vera		+	42	16				
Refractio		—	0	53				
Lunæ à vertice diſtantia apparens						44	28	30
Lunæ ſemidiameter apparens						0	16	47
Longitudo ſtellæ γ Leonis					♌	25	45	00
Latitudo ejus borea						8	47	27
ejuſdem Aſcenſio recta						151	11	32
Stellæ a Polo boreo diſtantia						68	47	21
Angulus azimuthalis cum meridiano circulo						96	10	40
vera Stellæ a vertice diſtantia		63	22	13				
Refractio		—	1	46				
Diſtantia Stellæ a vertice viſibilis						63	20	27
Angulus Azimuthalis inter Stellam & Lunæ Centrum						12	10	30
Centri Lunæ a Stellâ diſtantia viſibilis						21	13	13
ſubducatur Lunæ ſemidiameter apparens						0	16	47
habebitur Lunæ limbi propioris a Stella diſtantia viſibilis						20	56	26

hæc vero arcum obſervatum ſuperat 6′. 26″, & tempus aſſumptum correctione indiget.

Tempori igitur addantur 15^{m} (Luna enim Stellam verſùs progreditur) & ad tempus medium Grenovicenſe 13^{h}. 36^{m} invenietur Longitudo Lunæ correcta ♌ 4°. 14 . 10″. cum Latitudine boreâ 4°. 59′. 40″, & ex inventis iterum Lunæ & Stellæ diſtantiis a vertice viſibilibus cum angulo azimuthali comprehenſo, invenietur Limbi Lunæ a Stellâ diſtantia 20°. 47′. 17″ quæ 2′. 43″ ab obſervatâ deficit. Luna igitur temporis 15^{m} ſpatio, motu ſuo verſus Stellam arcum 9′. 9″ percurrit; et,

Ut 9′. 9″ : 6′. 26″ : : 15^{m} : 10^{m}. 33^{s}.

addantur igitur 10^{m}. 33^{s} tempori prius aſſumpto 13^{h}. 21^{m} & fiet 13^{h}. 31^{m}. 33^{s}. tempus Grenovicenſe quæſitum; eritque temporum differentia 2^{h}. 18^{m}. 33^{s} cui proportionalis eſt arcus 34°. 38′. 15″ Meridianorum diſtantia quæſita.

In hoc Exemplò diſtantia Lunæ a Stellâ viſibilis, ſine ambarum a vertice diſtantiis ſatis accuratè definiri non potuit, propter nimiam in altitudinibus tam diverſis refractionum differentiam. Ubi verò earum altitudines non valdè inæquales ſunt, [*] correctio

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[*] Vid. Acta Philoſoph. No. 368. p. 169.

correctio propter Refractiones ſatis accuratè fiet, ſi arcus obſervatus, totidem minutis ſecundis quot in eo numerantur gradus, augeatur; & ex Parallaxium inveſtigatione computus nonnihil compendioſior reddetur.

EXEMPLUM.

Anno 1725. Dec. 10. 12^{h}. 50^{m} temporis medii ſub Meridiano ad occidentem Grenovicenſis, & Poli borei elevatione gr. 48, Stella β Tauri à limbo Lunæ remotiore 47°. 57′. 12″ diſtare obſervabatur. Quæritur Meridiani ignoti a Grenovicenſi diſtantia.

Augeatur arcus obſervatus propter refractiones 48″, & fiet 47°. 58′.

Sumantur pro temporum differentia 3^{h}. 44^{m}. & fiet tempus Grenovicenſe 16^{h}. 34^{m}.

		°	′	″		°	′	″
Ad hoc tempus Longitudo Lunæ ſecundùm tabb. eſt	♌	6	4	0				
Correctio ex errorum Abaco	+		0	48				
Longitudo Lunæ vera					♌	6	4	48
Latitudo ejus borea						4	58	6
Parallaxis Lunæ horizontalis vera						1	0	12
Meridiani ignoti Aſcenſio recta						103	9	3
Gradus Ecliptici nonageſſimus					♋	9	40	0
Lunæ Parallaxis Longitudinis, addenda						0	24	38
Parallaxis Latitudinis, demenda						0	21	23
Longitudo Lunæ apparens					♌	6	29	26
Latitudo ejus borea apparens						4	36	43
Stellæ γ Tauri Longitudo					♊	18	43	50
ejuſdem Latitudo borea						5	21	34

Dantur igitur in triangulo ſphærico duo latera, diſtantia ſcilicet Lunæ apparens a Polo Ecliptici boreo 85°. 23′. 17″, & diſtantia Stellæ ab eodem 84°. 38′. 26″. unà cum angulo ab illis comprehenſo, differentia ſcilicet Longitudinum 47°. 45′. 36″, ad latus tertium inveniendum — — — — — 47 34 25
quod auctum ſemidiametro Lunæ apparente — — — — — — 0 16 48
fiet limbi Lunæ remotioris à Stellâ diſtantia apparens — — — 47 51 13
verum arcus ex obſervatione fuit — — — — — — — — — 47 58 0
Differentia — — — — — — — — — — 0 6 47

Ex conjecturâ corrigatur tempus. addantur itaque 15^{m} tempori aſſumpto & fiet 16^{h}. 49^{m}. Longitudo Lunæ correcta ad hoc tempus invenietur ♌ 6°. 14′. 7″, Latitudo ejus borea 4°. 57′. 58″. & Parallaxibus iterum inventis, habebitur ex reſolutione trianguli ſphærici diſtantia centri Lunæ apparens à Stellâ 47°. 43′. 51″, quæ ſemidiametro Lunæ aucta fiet 48°. 0′. 39″. arcum ex obſervatione inventum 2′. 39″ ſuperans. Et cum horis 16. 34^{m} diſtantia Lunæ à Stellâ ab obſervata deficiebat minutis 6′. 47″, Luna à Stellâ digrediebatur 9′. 26″, ſpatio temporis 15 minutorum; et

Ut 9′. 26″ : 6′. 47″ : : 15^{m}: 10^{m}. 42^{s}.

addantur igitur 10^{m}. 42^{s}, tempori ad priorem computum aſſumpto, & habebitur 16^{h}. 44^{m}. 42^{s}, tempus medium Grenovici numeratum cum obſervatio in Meridiano ignoto facta fuit. Et temporum differentiæ 3^{h}. 54^{m}. 42^{s}, arcus 58°. 40′. 30″ proportionalis eſt.

Eodem ferè modo ac in exemplis præcedentibus invenietur temporum differentia ex obſervatâ Lunæ a Sole diſtantiâ. Et cùm Sol latitudine careat eò magis ſimplex evadit calculus. Ratio tamen Semidiametri ejus habenda eſt, quæ arcui ex computo invento addenda vel demenda erit prout Limbus ejus remotior vel propior obſervabatur. Solis ſemidiameter invenietur ope tabulæ (O o 5) quæ diametros ejus exhibet Anomaliæ ejus mediæ reſpondentes.

PRÆCEPTA CALCULI PLANETARUM QUINQUE.

Ad datum tempus, Planetæ ſuperioris vel inferioris locum invenire.

1. Inveniatur Longitudo Solis vera ad tempus datum. Et è Tabulâ *Log. diſtantiarum Solis a terra* (E e 4), capiatur logarithmus ad mediam Solis anomaliam reſpondens.

2. E Tabulis *Epocharum & mediorum motuum*, ad tempus datum colligantur, Planetæ, Aphelii ejus, & Nodi, Longitudines mediæ.

3. Aphelii Longitudo a Longitudine Planetæ mediâ ſubducta, dabit Anomaliam ejus mediam & in tabulâ Æquationum Planetæ, inveniatur Æquatio Elliptica huic reſpondens, quæ ſubducta à Longitudine mediâ vel eidem addita, ſecundùm tabulæ indicem, dabit Planetæ Longitudinem heliocentricam in orbitâ propriâ.

4. A Longitudine Planetæ heliocentricâ, ſubducatur Longitudo Nodi, reſiduum, Argumentum Latitudinis appellatur; cujus ope in tabulâ *Latitudinariâ Planetæ* inveniantur Orbitæ ejus Inclinatio, Reductio, & Logarithmus curtationis. Reductio a Planetæ longitudine heliocentricâ ſubducta, vel eidem addita ſecundùm tabulæ indicem, dat veram ejus Longitudinem heliocentricam in Eclipticâ.

5. E Tabulâ *logarithmorum diſtantiarum Planetæ a Sole*, capiatur Logarithmus Anomaliæ Planetæ mediæ reſpondens, qui Logarithmo curtationis diminutus, fiet logarithmus diſtantiæ Planetæ à Sole curtatæ.

6. Planetæ ſuperioris Longitudo heliocentrica a Longitudine Solis, vel Solis Longitudo ab inferioris Planetæ Longitudine ſubducta, angulus Commutationis appellatur.

7. Differentiæ Logarithmorum diſtantiæ Solis a Terra, & diſtantiæ Planetæ a Sole, addatur anguli gr. 45 tangens logarithmica, erit ſumma tangens logarithmica anguli gradus 45 ſuperantis.

Tangenti logarithmicæ exceſſus auguli hujus ſupra gr. 45, addatur tangens logarithmica dimidii anguli Commutationis, horum ſumma erit tangens anguli quo auctus dimidius commutationis angulus Planetæ ſuperioris, vel diminutus ſi

Planetæ

Planeta unus ex inferioribus ſit, fiet Angulus qui Elongationis appellatur. Si vero Commutationis angulus dimidius tria ſigna ſuperet, augendum vel minuendum erit ejus ad ſex ſigna complementum angulo invento, ut habeatur Elongatio.

8. Si Comutationis angulus ſex ſignis minor ſit, Elongatio Planetæ ſuperioris a Solis longitudine ſubducta, illa verò Planetæ inferioris eidem addita, veram Planetæ Longitudinem geocentricam dabit. Si vero angulus ille ſex ſigna ſuperet contrarium in utriſque faciendum eſt.

9. Tangens inclinationis Orbitæ Planetæ, eſt ad tangentem Latitudinis ejuſdem geocentricæ, in ratione ſinus anguli Commutationis ad ſinum anguli Elongationis.

EXEMPLUM I.

Quæritur locus Planetæ Veneris geocentricus An. 1690. *Jun.* 13. 1^{h}. $17\frac{1}{2}^{m}$ *temporis medii.*

	☉ Anom.med.	☉ Apog.	♀ Long. med.	♀ Apog.	♀ Nodus.	Inclin Bor.
	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′ ″	
1690.	6 12 55 43	3 7 28 3	7 22 26 18	10 6 22 5	2 13 52 43	° ′ ″
Jun. 13.	5 11 38 19	0 27	8 22 45 20	25	14	2 58 42
hor. 1	2 28		4 0			
min. 17	42	3 7 28 30	1 8	10 6 22 30	2 13 52 57	
ſec. 30	1		2	6 8 54 18	2 1 31 20	
				♀ Med.Anom.	Arg. Latit.	
☉ M. Anom.	11 24 37 13		4 15 16 48			
Apog.	3 7 28 30	Proſtaph.	+ 7 29			
	3 2 5 43		4 15 24 17			
Proſtaph.	+ 10 41	Reductio	— 2 31			
☉ Long.	3 2 16 24	♀ Helico.	4 15 21 46			
♀ Elongat.	+ 17 38 40	☉ Subtr.	3 2 16 24			
♀ Long.Geoc.	3 19 55 4	Commut.	1 13 5 22			
♀ Lat. Bor.	1 19 21	dimidium	21° 32 41			

Log. diſt. terræ à Sole		5.007256
Log. diſt. ♀ a Sole		4.855745
Tang.	54 47 51	10.151511
	—45 0 0	
Tang.	9 47 51	9.237255
Tang.	21 32 41	9.596391
Tang.	3 54 1	8.833646
	17 38 40	♀ Elongatio.

Commut.	43 5 22	C. Ar	0.16549
Elong.	17 38 40	Sin.	9.48160
Inclin.	2 58 42	tan.	8.71624
♀ Lat.	1 19 21	tan.	8.36333

EXEMPLUM. II.

Quæritur locus Planetæ Jovis Geocentricus An. 1690. *Dec.* 3. 6^h. 30^m *temporis medii.*

	☉ Anom.med.	☉ Apog.	♃ Long. med.
1690.	6 12 55 43	3 7 28 3	11 13 7 16
Dec. 3	11 2 8 51	0 56	28 0 58
hor. 6	14 47		1 15
min. 30	1 14	3 7 28 59	6
☉ An. med.	5 15 20 35		0 11 9 35
☉ Apog. +	3 7 28 59	♃ Proſtaph.	+ 10 57
	8 22 49 34		0 11 20 32
Proſtaph.	— 30 2	Reductio	+ 0 4
☉ Long.	8 22 19 32	♃ Long. Heli.	0 11 20 36
♃ Elong. +	3 7 39 26	à ☉	8 22 19 32
♃ Long. Geoc.	11 29 58 58	Commutatio	8 10 58 56
Lat. Auſtr.	1 22 47	ſemiſ.	4 5 29 28
		ſemiſſis compl.	54 30 32

♃ Apog.	♃ Nodus.	Inclin. Auſtr.
6 9 21 48	3 7 25 50	° ′ ″
1 6	46	1 18 58
6 9 22 54	3 7 26 36	
6 1 46 41	9 3 53 56	
♃ An. med.	Arg. Latit.	

Log. diſt. ♃ à Sole			5.694521
Log. diſt. ⊖ à Sole			4.992841
Tang.	78 45 31		10.701680
	— 45		
	33 45 31	tang.	9.825034
	54 30 32	tang.	10.146874
	43 8 54	tang.	9.971908
	97 39 26	♃ Elongatio.	
Commut.	70 58 56	Co. Ar	0.02437
Elong.	97 39 26	ſin.	9.99611
Inclin.	1 18 58	tan.	8.36125
Latitud. ♃	1 22 47		8.38173

PRÆCEPTA CALCULI SATELLITUM JOVIS.

Diſtantias apparentes Satellitum a Jovis Centro è terra viſas, ad datum tempus invenire.

1. Inveniatur Longitudo Solis vera, unà cum Longitudinibus Planetæ heliocentricâ & geocentricâ, ad tempus datum.

2. E Tabulis *Epocharum & mediorum motuum* (A a a a 3 & ſeqq) colligantur Satellitum motus medii ad tempus datum, unà cum loco Apſidis Satellitis quarti, qui ab ejus Longitudine mediâ ſubductus, dabit hujus Satellitis Anomaliam mediam. In tabulâ *Æquationum Veneris* (U u 2) (cujus orbitæ illa Satellitis quarti ferè ſimilis deprehenditur) ad hanc mediam Anomaliam inveniatur æquatio, quâ diminuta vel aucta Longitudo media quarti Satellitis, fiet ejus Longitudo vera. Cæterorum trium motus medii Æquatione non indigent.

3. De locis Satellitum ſingulis ſubducatur Jovis Locus geocentricus, & in tabulâ *Diſtantiarum apparentium Satellitum a Centro Jovis, in Planetæ ſemidiametris & ſemidiametri centiſſimis* (G g g g). inveniantur ſingulorum diſtantiæ apparentes a Centro Jovis, ad hæc reſidua reſpondentes. Et cum hoc reſiduum minus ſex ſignis fuerit, Satelles ad Planetæ partes orientales conſpicietur, ſi vero ſex ſigna ſuperaverit, ad occidentales; ut in indice tabulæ notatur.

Hæ quidem Satellitum diſtantiæ apparentes a centro Jovis, Correctione non egebunt ſi Jupiter in Perihelio ſuo & etiam in oppoſitione ad Solem fuerit. Ad minimam

minimam ſcilicet Jovis à Terrâ diſtantiam tabulæ conſtructæ ſunt. In majoribus verò Planetæ à Terrâ diſtantiis, ſatellites, propter motum luminis progreſſivum, locos è tabulis inventos ſeriùs occupare videbuntur. Corrigendum eſt igitur tempus datum ope tabularum *Æquationum luminis* (F f f f 4).

4. A Solis Longitudine ſubducatur Longitudo Jovis heliocentrica, & in tabulâ *Æquationum luminis*, inveniatur Æquatio huic reſiduo reſpondens; quæ augenda eſt è tabulâ *Correctionum Æquationum luminis* ad Jovis locum heliocentricum; & tempus datum hâc Æquatione auctum, erit illud ipſum, quo ſatellites locos in tabulis inventos occupare videbuntur.

5. Ut igitur habeantur poſitiones Satellitum ad ipſum tempus datum, æquatio luminis ab illo auferenda eſt, & computus ad tempus ſic correctum inſtituendus.

EXEMPLUM.

Quæruntur diſtantiæ Satellitum à Centro Jovis, & eorum poſitiones meridie æquato Nov. 8. Anno 1719.

	M. Med. 1^{mi}.	M M. 2^{di}.	M M. 3^{tii}.	M M. 4^{ti}.	Apſ. 4^{ti}.		
	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′		s ° ′ ″
1719.	8 2 18 20	3 18 14 0	10 10 51 58	0 26 38 4	11 9 12	☉	7 26 37 23
Nov. 8.	4 8 33 43	10 8 56 9	7 9 5 57	8 10 11 12	31		
						♃ H	5 21 26 56
	0 10 52 3	1 27 10 9	5 19 57 55	9 6 49 16	11 9 43	♃ G	6 0 8 11
♃ Geoc.	6 0 8 11	6 0 8 11	6 0 8 11	+ 42 33	9 27 6		s ° ′
						☉ à ♃	2 5 11
	6 10 43 52	7 27 1 58	11 19 49 44	9 7 31 49			
				6 0 8 11			m s
						Æq. Lum.	10 28
				3 7 23 38		Correctio	3 25
	1,1 Occ.	7,89 Occ.	2,64 Occ.	26,17 Ori.			13 53

Hæ ſunt Satellitum à Centro Jovis diſtantiæ & poſitiones 13^{m}. 53^{s} poſt meridiem diei Nov. 8vi æquatum. Pro illorum verò locis ad ipſum tempus datum computus inſtitui debet ad 23^{h}. 46^{m}. 7^{s} diei præcedentis. Cum autem Satellitibus dignoſcendis præcipuè inſerviat hæc computatio, ad quod parvi ſit plerumque momenti quadrantis horæ differentia, Æquationes luminis hic negligi poſſunt.

Tempus Eclipſis Satellitis Jovis cujuſcunque, quæ proximè poſt datum tempus eſt futura, invenire.

1. Ad datum tempus inveniantur Solis Longitudo vera, & Longitudines Jovis heliocentrica & geocentrica.

2. Ex *Epocharum & mediorum motuum* tabulis colligantur Satellitis motus medii ad tempus datum. Et, ſi Quarti Satellitis Eclipſis quæratur, corrigenda eſt Longitudo ejus media Æquatione Centri Veneris, ut ſupra monſtratum eſt.

3. A Longitudine Jovis heliocentricâ in Orbitâ propriâ ſubducatur Longitudo Nodi Satellitis (qui Anno 1717 fuit = 11°. 30′), & in tabulâ *Latitudinariâ Satellitum Jovis* (G g g g 2) inveniatur Reductio huic argumento reſpondens, quâ Longitudo Jovis aucta vel diminuta, ſecundùm tabulæ indicem, ad Satellitis Orbitam reducetur.

4. A Jovis Longitudine ſic reductâ ſubducatur longitudo Satellitis media, & in tabulâ *Temporis mediis Satellitum motibus &c.* (E e e e & ſeq) huic reſiduo reſpondens inveniatur æquatio, quâ ſi augeatur tempus datum, habebitur mediæ Eclipſis tempus medium. Quod ſi non magis unius diei ſpatio à dato tempore diſtet, correctione non indigebit; ſi verò magis diſtiterit, calculus ad horam unam aut alteram ante tempus mediæ Eclipſis ſupra inventum, denuò inſtituendus eſt.

5. Tempus mediæ Eclipſis ſic inventum, Æquatione luminis augendum eſt.

6. In tabulis *Semidurationum Eclipſium Satellitum Jovis,* (F f f f 2 & ſeq), ad Jovis à Nodo diſtantiam, inveniatur Eclipſis ſemiduratio, quæ à tempore mediæ Eclipſis ſubducta, Satellitis in Jovis umbram immerſionem dabit, & ad idem addita, ejuſdem ex umbrâ emerſionem.

EXEMPLUM.

Quæritur tempus medium Eclipſis primi Jovis Satellitis proximè futuræ poſt meridiem Diei Nov. 8vi. æquatum, Anno 1719.

	s	°	′	″
Longitudo Solis vera tunc temporis fuit — — —	7	26	37	23
Longitudo Jovis heliocentrica in Orbitâ propriâ — —	5	21	25	56
Nodi Satellitis Longitudo, ſubtrahenda — — — — —	10	11	30	0
Argumentum Latitudinis — — — — — — —	7	9	55	56
Reductio, à Longitudine Jovis ſubtrahenda — — —			—1	59
Jovis locus ad Orbitam Satellitis reductus — — — —	5	21	23	57
Subtrahatur inde Satellitis Longitudo — — — — —	0	10	52	3
reſiduum erit, diſtantia Satellitis à Conjunctione quæſitâ — —	5	10	31	54
		h	m	s
Huic arcui, in tabulâ *Temporis medio* &c. reſpondent — — —		18	56	29
addatur Æquatio Luminis correcta — — — — —		+	13	53
Summa erit tempus medium Conjunctionis apparentis Nov. 8 —		19	10	22
Semiduratio Eclipſis — — — — — —		∓ 1	6	41
Immerſio		18	3	41
Emerſio		20	17	3

Notandum eſt, quod à tempore conjunctionis Jovis cum Sole ad ejuſdem ad Solem oppoſitionem, Satellitis primi immerſiones ſolæ ſunt viſibiles; ab oppoſitione verò ad Conjunctionem, emerſiones ejus ſolummodo videri poſſunt.

Idem

Idem ferè obtinet in Satellite ſecundo; ubi verò Jovis locus heliocentricus eſt circa medium Tauri, vel Scorpii, & Jupiter eodem tempore in quadraturis ad Solem, hujus tam immerſiones quam emerſiones ſunt quandoque viſibiles.

Si Solis à loco Jovis heliocentrico diſtantia major fuerit angulo gr. 45, tertii Satellitis & Immerſiones & Emerſiones ſunt viſibiles.

Ambo hæc Phænomena in quarto Satellite videre licet, ubi diſtantia Solis à loco Jovis heliocentrico angulum gr. 24 ſuperat.

Sicubi verò Jovis diſtantia à Satellitum Nodo alterutro angulum gr. 52 ſuperat, Satelles quartus eclipſin non patietur.

Errata in Præceptis.

P (a) 2, l. 9, *poſt* tera, *dele comma.* l. 34, *pro* aquatio, *lege* æquatio. l. 37, *poſt* addendæ, *pone comma.* p. (a) 3, l. 10, *poſt* . Pro, *dele punctum.* l. 16, pro *Solis & Lunæ,* lege *Lunæ cum Sole.* l. 17, *pro* ſeq.), *lege* ſeqq.). ibid. *pro* Tabulis, *lege* tabulâ. *ibid. &* 18 *pro* (* E e 4) *lege* (* * E e). l. 17, *poſt* ſubducta *pone comma, & etiam poſt* tabulæ. p. (a) 4, l. 22, *pro* Anom. med. *lege* ☉. Anom. med. p. (b) l. 8, poſt *gradus,* adde *& ad minuta.* l. 21, *poſt* invento, *adde* in conjunctionibus, vel ab ejus oppoſito in oppoſitionibus. *In Exemplo, pro* Proſtaph. *lege* Proſthaph. *et in exemplis ſequentibus, ferè omnibus, ubi mendosè legitur* Proſtaph. *pro* Proſthaph. *In ejuſdem exempli numeris ad dextram, pro* 0. 5. 20. 38, *lege* 0. 4. 20. 38. p. (b) 2, l. 4, *pro* min. 42. ſec. 26. *lege* min. 40. ſec. 16. l. 6, *pro* ſubducenda; addatur, *lege* addenda; ſubducatur. l. 7, *pro* 45^{m}. 24^{s}, *lege* 35^{m}. 18^{s}. l. 35, *pro* (* * E e) *lege* (* * E e 3). p. (b) 4, l. *antepen. dele* s ° ′.

P. (c) *poſt* logarithmus, *pone comma.* l. 34, *poſt* dium *pone comma.* l. 38, *pro* diſtaverit *lege* diſtans erit. l. 29, *poſt* Radium, *pone comma.* p. (c) 3, l. 21, *pro* 33. 19. 34, *lege* 33. 19. 54. p. (c) 4, l. 4, *pro* exactum, *lege* exactam. l. 6, *pro* invenietur, *lege* inveniatur. *ibid. pro* culibet, *lege* cuilibet. l. 24, *pro* Perodio *lege* Periodo. p. (d) l. 3, *pro* manſiſſit, *lege* manſiſſet. p. (d) 2, l. 7, *pro* Parrallaxis *lege* Parallaxis. l. 30, *pro* eorundum, *lege* eorundem. p. (d) 3, l. 1, *pro* tranſeuntis, *lege* tranſeunte. p. (e) l. 23, *pro* γ, *lege* β. l. *antepen. pro* ab obſervata, *lege* ex computo inventa, ab obſervatâ diſtantiâ.

P. (e) 2, l. 20, *poſt* mediam, *pone ſemicolon.* l. 37, *poſt* Sole, *adde* curtatæ. l. *antepen. lege* exceſſûs. p. (c) 3, l. 15, *pro* ♀ Apog. *lege* ♀ Aphel. *In exemplo medio, pro* ♀ Helico. *lege* ♀ Helioc. p. (e) 4, l. 4, *pro* ♃ Apog. *lege* ♃ Aphel. l. *ult. pro* Jupitur, *lege* Jupiter. In Indice, p. 1, l. 35, lege *Æquinoctio.* p. 2, l. 10, lege *Æquinoctio.*

PRECEPTS FOR COMPUTING THE PLACES OF JUPITER's SATELLITES.

To find the apparent Diſtances of the Satellites from the Center of Jupiter, *as ſeen from the Earth at a given time.*

1. Find the Sun's true Longitude, and the heliocentric and geocentric Longitudes of *Jupiter*, to the given time.

2. From the Table *Epochæ mediorum motuum Satellitum Jovis* (A a a a 3 and the following) and the Tables entitled *Medii motus &c.* for months, days, and parts of a day, collect the mean Motions to the given time; and likewiſe the mean Motion of the Apſis of the fourth Satellite, which, ſubtracted from the mean Longitude of that Satellite, will give its Mean Anomaly. In *Tabula Æquationum Veneris* (U u 2) ſeek the Equation anſwering to this Mean Anomaly; and add it to, or ſubtract it from the Mean Longitude of the fourth Satellite (as the Table ſhall direct), it will give the true Longitude thereof. The Mean Places of the other three Satellites require no Equation of the Center.

3. From the Place of each Satellite ſubtract the geocentric Longitude of *Jupiter*, and in the Table *Diſtantiæ apparentes Satellitum à centro Jovis &c.* (G g g g) find the numbers anſwering to the diſtance of each from the geocentric place of that Planet, which are apparent diſtances of each from the Center of *Jupiter* in Semidiameters and hundredth parts of a Semidiameter of that Planet. And when the Argument of this Table is leſs than ſix Signs, the Satellite will be ſeen to the Eaſt of *Jupiter*, when greater, to the Weſt; as is expreſſed at the top and bottom of the Table.

Theſe apparent diſtances of the Satellites from the Center of *Jupiter*, need no correction when that Planet is in its Perihelion, and at the ſame time in oppoſition to the Sun; for the Tables are conſtructed to the neareſt diſtance of *Jupiter* from the Earth: But at all other times the Satellites will appear to come later to the places found from the Tables, than the time to which they were computed, on account of the progreſſive motion of Light. The given time therefore muſt be corrected by means of the Tables *Æquationes Luminis addendæ*, and *Æquationum Luminis Correctiones* (F f f f 4).

4. From the Sun's Longitude, ſubtract the heliocentric Longitude of *Jupiter*, and in the Table *Æquationes Luminis* find the Equation anſwering to this Remainder, to which add the Equation from the Table *Æquationum Luminis Correctiones* found by the heliocentric Longitude of *Jupiter*; their Sum, added to the Time for which the computation was made, will give the true time when the Satellites ſhall appear in the Places before found.

5. Therefore to obtain the Situations of the Satellites to a given time, ſubtract the Equations of Light from the time given, and compute to the time ſo corrected.

EXAMPLE.

Required, the apparent Diſtances of the Satellites from the Center of Jupiter, *and their Situations on the mean Noon of* Nov. 8, 1719.

	M. Mot. 1 Sat.	M. M. 2d Sat.	M. Mot. 3d Sat.	M. M. 4th Sat.	Apſ. 4th		
	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′ ″	s ° ′		s ° ′ ″
1719	8 2 18 20	3 18 14 0	10 10 51 58	0 26 38 4	11 9 12	☉	7 26 37 23
Nov. 8	4 8 33 43	10 8 56 9	7 9 5 57	8 10 11 12	31	♃ H	5 21 26 56
	0 10 52 3	1 27 10 9	5 19 57 55	9 6 49 16	11 9 43	♃ G	6 0 8 11
♃ Geoc.	6 0 8 11	6 0 8 11	6 0 8 11	+ 42 33	9 27 6		
						☉ fr. ♃ H	2 5 11
	6 10 43 52	7 27 1 58	11 19 49 44	9 7 31 49			
				6 0 8 11			m s
				3 7 23 38		Eq. of Light	10 28
						Correction	3 25
	1, 1 Weſt	7, 89 Weſt	2, 64 Weſt	26, 17 Eaſt.			13 53

Theſe are the apparent diſtances of the Satellites from the Center of *Jupiter* and their Situations 13ᵐ. 53ˢ after the mean Noon of *Nov.* 8. Therefore to obtain them to the given time, the computation ſhould be made to 13ᵐ. 53ˢ before the mean Noon, that is to 23ʰ. 46ᵐ. 7ˢ mean time of the preceding day. But as the chief end of this calculation is to diſtinguiſh the Satellites one from another, for which purpoſe the difference of a quarter of an hour is commonly of ſmall importance, the Equations of Light may here be neglected.

To find the time of the Eclipſe of any one of Jupiter's *Satellites, which ſhall happen next after a given Time.*

1. Find the Sun's true Longitude, and the heliocentric and geocentric Longitudes of *Jupiter* to the given Time.

2. From the Table *Epochæ mediorum motuum* (A a a a 3) and the Tables for Months and Hours &c. collect the mean Place of the Satellite for the given time. And if an Eclipſe of the fourth Satellite is ſought, correct its mean Longitude by the Equation of the Center as above directed.

3. From the heliocentric place of *Jupiter* in his Orbit, ſubtract the Place of the Nodes of the Satellites (which, in the year 1717, was found to be ♒ 11°. 30′) the remainder will be the Argument of Latitude; and in *Tabula Latitudinaria Satellitum Jovis* (G g g g 2) find the Reduction anſwering to this Argument, which, added to, or ſubtracted from the heliocentric place of *Jupiter*, according as the Table ſhall direct, will reduce the ſame to the Orbit of the Satellite.

4. From the Place of *Jupiter* reduced to the Orbit of the Satellite, ſubtract the mean Place of the Satellite, and in *Tabula temporis medio primi Satellitis a Jove motui congruentis (*E e e e 4*)* (if the Eclipſe of the firſt Satellite be required*)* or, in *Tabula temporis mediis Satellitum ſecundi, tertii & quarti motibus a Jove congruentis* (F f f f*)* (if the Eclipſe of one of the other three be ſought*)* find the time anſwering to this remainder, which, added to the time given, will give the mean time of the Middle of the Eclipſe, which, if it happen within a day of the given time, may be taken as correct; but if it exceed a day, the computation muſt be made over again to an hour or two before the time ſo found.

5. To the time of the Middle of the Eclipſe found as above, add the Equations of Light.

6. In the Tables *Semidurationes Eclipſium Satellitum Jovis* (F f f f 2 &c.) find the Semiduration of the Eclipſe of the Satellite, anſwering to the diſtance of *Jupiter* from the Node, which, ſubtracted from the time of the Middle of the Eclipſe, will give the Immerſion of the Satellite into the Shadow of *Jupiter*, and added to the ſame will give its Emerſion out of the Shadow.

EXAMPLE.

Required the mean time of the Eclipſe of the firſt Satellite of Jupiter *which ſhall happen next after the mean Noon of* Nov. 8. 1719.

	s	°	′	″
The Sun's true Longitude at the given time	7	26	37	23
The heliocentric Place of *Jupiter* in his Orbit	5	21	25	56
The Place of the Node of the Satellites, ſubtract	10	11	30	0
The Argument of Latitude	7	9	55	56
The Reduction to be ſubtracted from the Place of *Jupiter*			−1	59
The Place of *Jupiter* reduced to the Orbit of the Satellite	5	21	23	57
from which ſubtract the Place of the Satellite	0	10	52	3
there remains the diſtance of the point of Conjunction from the Satellite	5	10	31	54

	h	m	s
The time anſwering to this Arc in *Tabula temporis medio &c.* is	18	56	29
Add the Equation of Light with its correction	+	13	53
Their Sum will be the mean time of apparent Conjunction *Nov.* 8	19	10	22
Subtract and add the Semiduration of the Eclipſe	∓1	6	41
Immerſion	18	3	41
Emerſion	20	17	3

It is to be obſerved, that the Emerſions of the firſt Satellite are not viſible from the time of the Conjunction of *Jupiter* with the Sun to the time of his Oppoſition; neither are the Immerſions thereof viſible from the time of *Jupiter*'s Oppoſition to the Sun to the time of his Conjunction.

The like holds with regard to the ſecond Satellite, except that when *Jupiter*'s heliocentric Place is near the Middle ot *Taurus* or of *Scorpio* both the Immerſions and Emerſions are ſometimes to be ſeen.

When the Sun's diſtance from the heliocentric Place of *Jupiter* exceeds an Angle of 45 degrees, both the Immerſions and Emerſions of the third Satellite are viſible.

In the fourth Satellite both theſe phænomena are viſible when the Sun's diſtance from the heliocentric Place of *Jupiter* exceeds an Angle of 24 degrees. But when *Jupiter* is not within the diſtance of 52 degrees of either of the Nodes, there can be no Eclipſe of this Satellite.

R E-

REMARK.

THE curious lover of Aſtronomy, has therefore in theſe ſeries of oppoſitions of the Sun and ſuperior Planets, as it were a ſynopſis of their motions for ſixty ſucceſſive years, according to the order of time in which they were ſeen in the Heavens, compiled with no leſs ſtrictneſs than diligence, from the moſt accurate Obſervations we could procure. You ſee alſo our Tables are made to undergo an examination rigid enough: And yet be not ſurprized that in *Jupiter* the error ſometimes ariſes to eight minutes, and ſometimes in *Saturn* to ten: For indeed it cannot be otherwiſe without aſſuming new hypotheſes not yet ſufficiently known and proved by the Touch-ſtone of the Heavens. *Jupiter* indeed in his motion from the oppoſition in the year 1677 to that of the year 1689, according to undoubted Obſervations, was found ſlower by twelve whole minutes than he was in the preceding or ſubſequent Revolution. Alſo *Saturn*'s Period, between the years 1668 and 1698, was ſhorter than his mean Revolution by almoſt a whole week; and another Period of his compleated between the years 1689 and 1719, was longer than the mean Revolution by about as many days; ſo that their difference in duration was above thirteen days. But whether this will be ſo for the time to come muſt be left to the Obſervation of Poſterity.

It is more than probable that this is owing to the mutual actions of the greater Planets upon one another, diſturbing the centripetal forces of the Sun: For what happened in the year 1683 ſeemed no ſlight argument to prove this; for then there was a conjunction of *Jupiter* and *Saturn* in thoſe parts of their Orbits, where, on account of the ſituation of the Apſes, the Planets approached very near to each other; their joint forces then urged *Saturn* towards the Sun, and on the contrary *Jupiter* from the Sun; wherefore *Jupiter*, having his proper velocity increaſed, and the centripetal force of the Sun being decreaſed, muſt have run out into a greater Orbit, and would require a longer time for a Revolution: While *Saturn*, at the ſame time, having his proper velocity diminiſhed, and being urged with a greater force towards the Sun, muſt have been forced into a leſs Orbit, and ſo revolve in a leſs time. If the ſame happen again and again, when *Jupiter* and *Saturn* are in conjunction in *Leo*, we may juſtly hope that the errors we find in their motions, as they are owing only to the joint efficacy of three Centers, at length may be removed by the *Newtonian Geometry*. But if not, or if the Periods ſhould prove longer where they are now the ſhorteſt, or the contrary, there muſt be ſome extrinſic cauſe, of which we are now ignorant. But more of this elſewhere.

The

The Reverend Mr. James Bradley'*s Obſervations on his Tables of* Jupiter'*s Satellites.*

IN theſe Tables we have determined the mean Motions of the Satellites, by comparing ſuch of the oldeſt Obſervations we could procure, as ſeemed to be the moſt accurate, with our own lately taken at Wanſted; when *Jupiter*, after four Revolutions, was nearly in the ſame place in his Orbit. But comparing in like manner the Obſervations at the diſtances of one, two, and three Revolutions of *Jupiter*, we have ſometimes found very remarkable differences in the motions of the three inferior Satellites, eſpecially in that of the ſecond, or next but one to *Jupiter*.

It is not yet certain, whether theſe inequalities do not in part ariſe from the Excentricities of their Orbits, and the motion of their Apſides; but by what we can collect from the motions of the ſecond Satellite, it is probable they may be occaſioned by the mutual action of the Satellites on each other: For ſometimes the motion of this Satellite does in ſo ſhort a time vary ſo conſiderably from its mean, that a ſmall Excentricity will not account for it; while on the other hand, the reſt of the Obſervations will not allow a great one. As far as we can hitherto find, the Period of theſe Errors nearly anſwers to the time the three inferior Satellites take in returning to the ſame ſituation with reſpect to each other and to the Axis of the Shadow of *Jupiter*, which is 437 days, or after 123 Revolutions of the ſecond Satellite. After this Period, the like Errors return, nearly in the ſame order: But in the intermediate time, that is, after 60 Revolutions, this Satellite will deviate 10^m, 20^m, 30^m, and even ſometimes 40 minutes of time from its rate of motion during the ſeven preceding, or the ſeven following months. Now becauſe the Satellites are not found in the ſame place in the heavens after the aforeſaid Period is compleated, it is poſſible theſe Errors may vary ſomewhat on that account. And if the Orbit of this Satellite be likewiſe excentric, as the late Obſervations ſeem to make it, the inequalities ariſing from both cauſes muſt be very intricate, and not eaſily to be ſeparated by Obſervation alone.

The Errors of the firſt and third Satellite are not ſo great, but ſeem to ariſe from the ſame cauſes; for they do not depend wholly on the Excentricity. We have alſo remarked a ſenſible difference between the durations of the Eclipſes of the firſt, made at the different Nodes, which were alternately longer and ſhorter: that is to ſay the durations of the Eclipſes at the deſcending Node in *Leo*, in the years $168\frac{2}{3}$, $169\frac{4}{5}$, and 1718, were at leaſt $2^h. 20^m$; whereas at the aſcending Node in *Aquarius*, in the years 1677, 1689, they did not exceed $2^h. 14^m$; as it plainly appeared by comparing many Obſervations of ſuch Immerſions and Emerſions as were as near together as could be got. And it is manifeſt this difference did not ariſe wholly from the Excentricity of the Orbit, if it have any; but to what cauſe it is owing

we

we are hitherto ignorant. In the mean while, till we can get more light in this matter from future Obſervations, it were to be wiſhed that ſome Geometer, in imitation of the great *Newton*, would apply himſelf to the inveſtigating theſe irregularities, from the certain and demonſtrative principles of Gravity.

From the Obſervations we have of the fourth Satellite, it is certain that its Orbit is elliptical: and all our late Obſervations are truly repreſented by ſuppoſing its greateſt Equation equal to that of the Planet *Venus*, or 48′; and that its higher Apſis was in ♓ 8°. 00′. at the beginning of the year 1717. On comparing this hypotheſis with the older Obſervations of the years 1671, 1676, and 1677, the Computations were found to differ greatly from the Obſervations. But putting back the Apſis to ♒ 14°. 00′ at the beginning of the year 1677, thoſe differences almoſt all vaniſhed. Allowing it therefore an equable motion of 6° forward in 10 years, the hypotheſis was found to agree with the intermediate Obſervations, for which reaſon we have followed it in our Tables. And we find our Numbers every where to agree with the Heavens (except only two Obſervations, both juſtly to be ſuſpected) within the ſixth part of a degree.

Our Table of the Equation of Light is made on a ſuppoſition that the Rays paſs equably over a ſpace equal to the diameter of the Earth's Orbit in 14 minutes of time, and it anſwers to all diſtances of *Jupiter* from the Earth when *Jupiter* is neareſt to the Sun. But as the diſtance of this Planet from the Sun, when in its Aphelion, is greater than its neareſt diſtance by one fourth of the diameter of the Earth's Orbit, we found it neceſſary to add another Table for the correction of theſe Equations.

As to the Latitudes of the Satellites, it is certain from the late Obſervations, that the Nodes of the fourth are at this time in 11½ degrees of *Aquarius* and *Leo*; and that thoſe of the third lie very near them. We have therefore aſſigned the ſame places to thoſe of the two inferior Satellites, not having yet found any thing from our Obſervations to the contrary. And if the Nodes of the Satellites were forty years ago in the 15th degree of *Aquarius* and *Leo*, where *Caſſini* places them, (whoſe authority in this matter is of the greateſt weight), they will appear to have gone back about one degree in each Revolution of *Jupiter*. We have retained *Caſſini*'s Inclination of the Orbits of the three inferior Satellites to the Plane of the Orbit of *Jupiter*, 2°. 55′; but we find the Inclination of the Orbit of the fourth to be ſomewhat leſs, that is to ſay 2°. 42′. It is certainly a very difficult matter to determine accurately the ſituation of Circles ſo extremely ſmall, nor is it to be undertaken without exquiſite Telleſcopes.

The Reverend Mr. *Pound* was pleaſed to add, by way of Appendix, the following Tables of his own, for computing the Eclipſes of the firſt Satellite by addition only, after the manner of Mr. *Caſſini*'s elaborate Tables, but much more compendiouſly.

Here follow Mr. *Pound*'s Tables of the firſt Satellite. Hhhh.

Of the Conſtruction of theſe Tables.

THESE Tables conſtructed from the preceding, and recommending themſelves by the eaſineſs and ſimplicity of the computation they afford, are deſigned for finding the Longitudes of places on the Earth; for by theſe alone, without the help of any other Tables, the Eclipſes of the firſt Satellite of *Jupiter* may be preſently found by addition only, ſo that the time and trouble of a laborious calculation need not deter ſuch as are not accuſtomed thereto, from theſe ſtudies.

That the Reader may the better comprehend what theſe numbers are, he is to take notice that the Epochs of the Conjunctions are the mean times of the firſt Conjunction of the Satellite with the mean Place of *Jupiter* in the current Julian Year, after ſubtracting 39^{m}. 8^{s}. therefrom, for the time the Satellite is paſſing over an Arc of 5°. $31'$. $36''$, equal to the greateſt Equation of *Jupiter*.

Number A is every where the mean Anomaly of *Jupiter* in thouſandth parts of a Circle, each equal to $21'$. $36''$. Num. B is the diſtance of the mean Place of *Jupiter* from the true place of the Earth, at the radical Time, in thouſandth parts of a Circle, diminiſhed likewiſe by $15\frac{1}{3}$ of thoſe parts for the greateſt Equation of *Jupiter*.

Hence, the greateſt Equations being ſubtracted from the Epochs, the others become every where additive: Thus the Equation of the Conjunctions is the ſum or difference of $39'$. $8''$, and of the time in which the Equation of *Jupiter* anſwering to the mean Anomaly A is paſſed over by the Satellite's mean Motion from *Jupiter*; hence it becomes 0 at Num. A 260, but at Num. A 740 is double the greateſt, or 1^{h}. 18^{m}. 16^{s}. In like manner the Equation to Num. B is the ſum or difference of $15\frac{1}{3}$ parts, and the ſame Equation of *Jupiter* in thouſandth parts of a Circle, applied contrarywiſe, and therefore becomes double, or 31, when Num. A is 260, and 0 when Num. A is 740. In the Table of Months Num. B encreaſes unequally on account of the inequality of the Sun's motion; therefore if to the collective Num. B its Equation be added, their Sum (or Num. B equated) will be the Angle of Commutation, or the diſtance of the Sun from the heliocentric place of *Jupiter*; and this is the Argument of the ſecond Equation, which is the Equation for the progreſſive motion of Light. The third Equation anſwers to Num. A, and is no other than the correction of the Equation of Light, and is likewiſe additive.

By this artifice, not only all the Equations become additive, but as both the Numbers A & B are of a decimal denomination, they are eaſily collected without any danger of miſtakes.

In Leap Years, after *February*, ſubtract one day from the Times of Conjunction found by the Tables.

Of the Tables of Saturn's *Satellites.*

THESE Tables of the motions of *Saturn*'s Satellites are no other than *Caſſini*'s, reduced to the Meridian of *London* and to the Julian Stile, which that moſt excellent Aſtronomer firſt publiſhed in the year 1716, in the Memoirs of the Royal Academy at *Paris*, and which we juſtly prefer to our own in the Philoſophical Tranſ. N° 356, as they were drawn up in haſte. Theſe Tables indeed are abundantly ſufficient to diſtinguiſh the Satellites among themſelves, and to find their places in reſpect to *Saturn*, which, becauſe of their ſmallneſs, would be hard to find by an indifferent eye; if it did not rightly know where to look for them: However it is evident they were not finiſhed by the renowned Author, but rather were preſented to the Public, that Aſtronomers by their means might conveniently know beforehand thoſe opportunities of making their Obſervations, which might very much conduce towards perfecting the theory of their motions.

Now the Periods of theſe Satellites, in which they revolve to the Equinox or beginning of *Aries*, are ſuppoſed to be theſe, *viz.*

	d	h	m	s		d	h	m	s
Of the firſt or *inmoſt*	1	21	18	27	*Of the ſecond*	2	17	41	22
Of the third or *middle*	4	12	25	12	*Of the fourth* (*the* Huygenian)	15	22	41	12
Of the fifth or *outmoſt*	79	7	47	0					

Now ſuppoſing (according to the general Rule of Nature, at leaſt in this our Syſtem, which obtains as well in the motions of the Satellites of *Jupiter* and the Moon, as in the motions of the primary Planets about the Sun) that the forces tending to the Center of *Saturn* are reciprocally in the duplicate Ratio of the diſtances, and therefore that the Cubes of their diſtances from his Center are as the Squares of the periodic Times; from the diſtance and period of the fourth, the diſtances of the reſt are deduced.

But by late Obſervations with the long Teleſcope of the Royal Society, which is above 120 feet, with the aſſiſtance of a moſt curious Micrometer, Mr. *Pound* found the Ratio of the diſtance of the fourth and greateſt Satellite from the Center of *Saturn*, to be to the Semidiameter of his Ring as 374 to 43, or as 8,7 to 1 nearly; alſo the Ratio of the Diameter of the Ring to that of *Saturn* itſelf to be as 7 to 3. Therefore by computation the diſtances will come out as follows.

	Radius of the Ring.	*Radius of* Saturn.		*Radius of the Ring.*	*Radius of* Saturn.
The firſt	2,097	4,893			
The ſecond	2,686	6,268	*The fourth*	8,698	20,295
The third	3,752	8,754	*The fifth*	25,348	59,154

And in this year 1719, on the 29th day of *May* Old Stile, at 10^h, Mr. *Pound* obſerving with the ſame Inſtruments, the fourth Satellite was ſeen in its greateſt eaſterly digreſſion, to be diſtant from the Center of *Saturn*, who was then in 7°. 41′ of ♏, three minutes and ſeven ſeconds. Whence, by a juſt computation, the Ratio of this diſtance of the Satellite from *Saturn* is to the diſtance of the Sun from the Earth, as 8,25 to 1000; from which the diſtance of the reſt may be eſtimated.

Now

Now *Caſſini* ſuppoſes the four inferior Satellites to move in the plane of the Ring, or that their Orbits are inclined to the plane of *Saturn*'s Orbit in an Angle of thirty degrees: For when *Saturn* is about the middle of *Gemini* and *Sagittarius*, then the greater Axis of the Ring, which is then of the greateſt width, is found to be nearly double to the leſſer Axis; and theſe Satellites ſeem to deſcribe Ellipſes always ſimilar to that of the Ring; ſo that in their greateſt digreſſions from the Planet they are found in the greater Axis of the Ring produced: Which things could not happen, unleſs the Orbits of the Satellites had almoſt the ſame ſituation with the plane of the Annulus or Ring.

But lately the famous Aſtronomer *Miraldus*, with the beſt of Teleſcopes, and eyes more than Lyncean, has ſought for the Nodes of the Ring; as may be ſeen in the *Mem. Roy. Acad. of Paris* for the years 1715 and 1716. For he demonſtrates from very ſubtil Obſervations, that the plane of the Ring in the year 1715, interſected the plane of *Saturn*'s Orbit at the 19°. 45′ of *Virgo* & *Piſces*; and granting the Angle of Inclination to be 30 degrees, the ſame plane of the Ring interſected the plane of the Ecliptic or Orbit of the Earth, in the 16°$\frac{1}{4}$ of ♍ & ♓, being inclined to it in an Angle of 31°. 20′.

In order therefore, at any given time, to know exactly the poſition, ſpecies, and points of the Apogee and Perigee, both of the Ellipſes of the Ring, and of thoſe which the Satellites deſcribe, we muſt reſolve an oblique angled ſpherical Triangle, as was ſhewn before in the Precepts for calculating the Latitudes of *Jupiter*'s Satellites.

Now as the Latitude of the Earth, in reſpect of the Orbit of *Saturn*, ſcarce ever exceeds the fourth part of a degree, it may, in this affair not yet ſufficiently known, be ſafely neglected, as if both Planets moved in the ſame Orbit. Wherefore, from the geocentric place of *Saturn*, ſubtract 5 ſig. 19°. 45′, and there will remain the Argument of Latitude; with which, in *Tabulâ Latitudinariâ Satellitum* I. II. III. IV. (K k k k 2) take the Inclination, which is the Angle wherein a viſual Ray drawn from the Earth to *Saturn* is inclined to the Orbits of theſe Satellites: And whoſe Sine is to Radius, as the leſſer Diameters of theſe apparent Orbits are to the greater: And let the Ellipſis of the Ring be of the ſame ſpecies, the apogean Semicircle lying towards the North, if the Argument of Latitude be leſs than ſix Signs, but toward the South if greater. We have added alſo a *Table of Reductions*, neceſſarily requiſite, in ſo great an inclination of the planes, for the knowledge of the true Apogee of the Satellites,

Moreover the moſt excellent *Caſſini* has lately diſcovered, that the fifth and outward Satellite is carried round in an Orbit very different from the reſt; its aſcending Node being found to be in 5°. 00′ of ♍, with an Angle of Inclination of 15° only, or of half the former. Wherefore we have accommodated alſo to this a Table of Inclination and Reduction.

A

SYNOPSIS

OF THE

ASTRONOMY of COMETS.

THE antient *Egyptians* and *Chaldeans*, if we may credit *Diodorus Siculus*, by a long courſe of Obſervations, were ſaid to be able to predict the Apparitions of Comets. But ſince they are alſo ſaid, by the help of the ſame arts, to have prognoſticated Earthquakes and Tempeſts, 'tis paſt all doubt, that their knowledge in theſe matters, was the reſult rather of meer aſtrological predictions, than of any aſtronomical Theories of the celeſtial motions. And the *Greeks*, who were the conquerors of both thoſe people, ſcarce found any other ſort of learning amongſt them, than this. So that 'tis to the *Greeks* themſelves as the inventors, and eſpecially the great *Hipparchus*, that we owe the Aſtronomy we have, and which is now improved to ſuch a height. But yet among the *Greeks*, the opinion of *Ariſtotle*, who would have Comets to be nothing elſe, but ſublunary vapours, or airy meteors, prevailed ſo ſo far, that this moſt difficult part of the Aſtronomical Science lay altogether neglected; for no body thought it worth while to take notice of, or write about, the wandering uncertain motions of what they eſteemed vapours floating in the Ether; whence it came to paſs, that nothing certain concerning the motions of Comets, can be found tranſmitted from them to us.

But *Seneca* the Philoſopher, having conſidered the phænomena of two remarkable Comets of his time, made no ſcruple to place them amongſt the celeſtial Bodies; believing them to be Stars of equal duration with the World, tho' he owns their motions to be governed by laws not then known or found out. And at laſt, which was no untrue or vain prediction, he foretells, that there ſhould be ages ſome time hereafter, to whom *time and diligence ſhould unfold all theſe myſteries*, and who ſhould wonder how 'twas poſſible the *Antients* could be ignorant of them, after ſome lucky interpreter of nature had ſhewn, *in what parts of the Heavens the Comets wandered, what ſort of Beings, and how great they were.* Yet almoſt all the Aſtronomers differed from this opinion of *Seneca*; neither did *Seneca* himſelf think fit to ſet down thoſe phænomena of the motion, by which he was enabled to maintain his opinion; nor the times of thoſe appearances, which might be of uſe to poſterity, in order to determine theſe things. And indeed in turning over many hiſtories of Comets, I find nothing at all that can be of ſervice in this affair before A. D. 1337. At which time *Nicephorus Gregoras*, a *Conſtantinopolitan* Hiſtorian and Aſtronomer, did pretty accurately deſcribe the paths of a Comet amongſt the fixed Stars, but was too lax as to the account of the time; ſo that this moſt doubtful and uncertain Comet only deſerves to be inſerted in our Catalogue for the ſake of its appearing near four hundred years ago.

The next of our Comets appeared in the year 1472, which is the ſwifteſt of all, and neareſt to the Earth; *Regiomontanus* obſerved it. This Comet, ſo fearful upon the account both of the magnitude of its body, and tail, moved forty degrees of a great Circle in the Heavens, in the ſpace of one day; and was the firſt, of which any proper Obſervations are come down to us. But all thoſe who conſidered Comets, until the time of *Tycho Brahe*, that great reſtorer of Aſtronomy, believed them to be below the Moon, and ſo took but little notice of them, reckoning them to be no other than vapours.

In the year 1577, *Tycho* ſeriouſly purſuing the ſtudy of the Stars, and having procured large inſtruments for the performing of celeſtial Menſurations, with far greater care and certainty than the Antients could ever hope for, there appeared a remarkable Comet; to the Obſervation of which *Tycho* vigorouſly applied himſelf; and found by many juſt and faithful trials, that it had no diurnal Parallax that was perceptible: And conſequently was no aerial vapour, but alſo much higher than the Moon; nay, might be placed amongſt the Orbs of the Planets, for any thing that appeared to the contrary; the cavilling oppoſition, made by ſome of the Schoolmen in the mean time, being to no purpoſe.

Tycho was ſucceeded by the moſt ſagacious *Kepler*. He having the advantage of *Tycho*'s Labours and Obſervations, found out the true Phyſical Syſtem of the World, and vaſtly improved the Science of Aſtronomy.

For he demonſtrated that *all the Planets perform their Revolutions in Elliptic Orbits, whoſe planes paſs thro' the Center of the Sun*; obſerving this law, that *the Areas of the elliptic Sectors, taken at the Center of the Sun, which he proved to be in the common focus of theſe Ellipſes, are always proportional to the times in which the correſponding elliptical Arcs are deſcribed.* He diſcovered alſo, that *the diſtances of the Planets from the Sun are in the ſeſquialter Ratio of the periodical Times*; or, which is all one, that *the Cubes of the diſtances are as the Squares of the times.* This great Aſtronomer had the opportunity of obſerving two Comets, one of which was a very remarkable one. And from the Obſervations of theſe, which afforded ſufficient indications of an annual Parallax, he concluded, that *the Comets moved freely thro' the Planetary Orbits, with a motion not much different from a rectilinear one*; *but of what kind he could not then determine.* Next, *Hevelius*, a noble emulator of *Tycho Brahe*, following *Kepler*'s ſteps, embraced the ſame hypotheſis of the rectilinear motion of the Comets, himſelf accurately obſerving many of them. Yet he complained that his Calculations did not perfectly agree to what he obſerved in the Heavens: And ſuſpected, that *the path of a Comet was bent into a curve line concave towards the Sun.*

At length came that prodigious Comet of the year 1680, which deſcending, almoſt perpendicularly towards the Sun, aroſe from him again with as great a velocity. This Comet, which was ſeen for four months continually, by the very remarkable and peculiar curvature of its Orbit, above all others, gave the fitteſt occaſion for inveſtigating the Theory of its motion. And the Royal Obſervatories, at *Paris* and *Greenwich*, having been for ſome time founded, and

committed

committed to the care of moſt excellent Aſtronomers, the apparent motion of this Comet was moſt accurately, perhaps as far as human ſkill could go, obſerved by Mr. *Caſſini* and Mr. *Flamſteed.*

Not long after, that great Geometrician the illuſtrious *Newton*, writing his *Mathematical Principles of Natural Philoſophy*, demonſtrated not only what *Kepler* had found, did neceſſarily obtain in the planetary Syſtem; but alſo, that all the phænomena of the Comets would evidently follow from the ſame principles; which he abundantly illuſtrated by the example of the ſaid Comet of the year 1680, ſhewing at the ſame time, a method of delineating the Orbits of Comets geometrically; therein ſolving, not without meriting the higheſt admiration of all men, a Problem whoſe intricacy rendered it ſcarce acceſſible to any but himſelf. This Comet he proved to move round the Sun in a parabolical Orb, and to deſcribe Area's, taken at the Center of the Sun, proportional to the times.

Wherefore, following the ſteps of ſo great a man, I have attempted to bring the ſame method to an arithmetical Calculation; and that not without ſucceſs. For, having collected all the Obſervations of Comets I could, I have framed the following Table, the reſult of a prodigious deal of calculation: Which, though but ſmall in bulk, will be no unacceptable preſent to Aſtronomers. For theſe numbers are capable of repreſenting all that has been yet obſerved about the motion of Comets, by the help only of the annexed general Table; in the making of which, I ſpared no labour, that it might come forth perfect, as a thing conſecrated to poſterity, and to laſt as long as the Science of Aſtronomy itſelf.

This Table of the Elements (M m m m 2) conſiſts of ten Columns, whereof the *firſt* gives the years wherein the Comets were ſeen. The *ſecond* and *third* exhibit the poſition of the planes of the Comets Orbits; that is, the points of the Ecliptic where their aſcending Nodes were at the time they appeared, and the Angle of their Orbits Inclination to the Ecliptic. The *fourth* gives the places of their Perihelions, or the Vertices of their parabolic Orbits, reckoned in their own Orbits. The *fifth* gives the leaſt diſtances of the Comets from the Sun in their Perihelions, in ſuch parts as the mean diſtance of the Sun from the Earth contains 100000. In the *ſixth* are the Logarithms of the Ratios of thoſe diſtances to that mean diſtance from the Sun. The *ſeventh* contains the Logarithms of their mean diurnal motions, the time in which the Comet traverſes ninety degrees of its Orbit from the Perihelion, being ſuppoſed to be divided into a hundred parts. The *eighth* exhibits the equated times of the Perihelions for the Meridian of *London* and *Julian* Stile. The *ninth* gives the Angles in the planes of their Orbits intercepted between their Perihelions and aſcending Nodes, by means whereof the calculus becomes ſomewhat eaſier. Finally, the *tenth* ſhews which of their motions were according to the order of the Signs, and which on the other hand were retrograde.

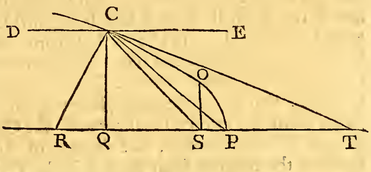
Then follow the Tables for the Motions of Comets.

The Conſtruction and Uſe of the General Table.

AS the Planets move in elliptic Orbits, ſo do the Comets (as 'tis ſaid) in parabolic ones, having the Sun in their common Focus, and deſcribe equal Areas in equal times. Now ſince all Parabola's are ſimilar Curves, therefore if any determinate part of the Area of a given Parabola be divided into any number of parts, by right lines drawn from the Focus; there will be a like diviſion made in all Parabola's under the ſame Angles, and their reſpective diſtances from the Focus are proportional: Conſequently this one Table of ours will ſerve for all Comets.

Now the manner of calculating this Table is thus derived.

In the Fig. let S be the Sun, P O C the Orbit of a Comet, P the Perihelion, O the place where the Comet is 90° diſtant from the Perihelion, C any other place. Draw the right lines C P, C S, and make S T, S R, equal to C S; and having drawn the right lines C T, C R, (whereof the one is a Tangent, and the other a perpendicular to the Curve) draw C Q perpendicular to the Axis P S R.



Now any Area being given, as $COPS = a$; 'tis required to find the Angle C S P, and the diſtance C S.

From the nature of the Parabola R Q is ever equal to half the Parameter to the Axis, and conſequently if the Parameter be put $= 2$, then $RQ = 1$.

Let $CQ = z$; then $PQ = \frac{1}{2}zz$; and the parabolic Segment $COP = \frac{1}{12}zzz$. But the Triangle C S P will be $= \frac{1}{4}z$; and ſo the mixtilineal Area C O P S will be $\frac{1}{12}z^3 + \frac{1}{4}z = a$; whence $z^3 + 3z = 12a$: Wherefore reſolving this cubic Equation, z or the ordinate C Q will be known. Now let the Area O P S be propoſed to be divided into one hundred equal parts. This Area is $\frac{1}{12}$ of the Square of the Parameter; and conſequently $12a$ is equal to that Square $= 4$. If therefore the Roots of theſe Equations $z^3 + 3z = 0{,}04$; $0{,}08$; $0{,}12$; $0{,}16$, *&c.* be ſucceſſively extracted, there will be obtained ſo many Values of z, or Ordinates C Q reſpectively, and the Area S O P will be divided into one hundred equal parts. And in like manner is the Calculus to be continued beyond the place O. Now the Root of this Equation, ſince R Q is $= 1$, is the tabular Tangent of the Angle C R Q, or half the Angle C S P, wherefore the Angle C S P is given. And R C, the ſecant of the ſame Angle C R Q, is a mean proportional between $RQ = 2PS$, or unity, and R T, which is the double of S C, as is evident from Conics. Therefore S P is to S C in the duplicate Ratio of the Radius to the ſecant of half the Angle from the Perihelion of the Comet; or elſe in the Ratio of the verſed Sine of the Angle C S R, or of the Angle from the Comet's Aphelion, to the Diameter of the Circle. After this manner therefore, I compoſed the foregoing Table, which ſerves to repreſent the motions of all our Comets, of which hitherto there has been none obſerved, but come within the laws of the Parabola. *.

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* Except that of 1680, which the Doctor calculates for an Elliptic Orbit.

It remains now to give the Rules for the Calculation, and to ſhew how the apparent place of a Comet may be determined by theſe numbers. Now *the velocity of a Comet moving in a parabola, is every where to the velocity of a Planet deſcribing a circle about the Sun, at the ſame diſtance from the Sun, as* $\surd 2$ *to* 1, as appears from *Cor.* 7. *Prop.* 16. *Lib.* I. *of the Princp. Phil. Nat. Math.* If therefore a Comet in its Perihelion was ſuppoſed to be as far diſtant from the Sun as the Earth is, then the diurnal Area, deſcribed by the Comet, would be to the diurnal Area deſcribed by the Earth, as $\surd 2$ to 1. And conſequently the time of the ſynodical Year, or $365^d. 6^h. 9^m$, is to the time in which ſuch a Comet would deſcribe the Quadrant of of its Orbit from the Perihelium, or the Area analogous to the ſpace P O S, as the Area of a circle, or 3,14159 *&c.* to the parabolic Area $= \frac{4}{3} \times \surd \frac{1}{2} = \frac{2}{3} \surd 2$. Therefore the Comet would deſcribe that Quadrant in 109 days, 14 hours, 46 minutes; and ſo the parabolic Area P O S being divided into 100 parts, to each day there would be allotted 0,912280 of thoſe parts; the Logarithm whereof, *viz.* 9,960128, is to be kept for continual uſe. But then the times in which Comets, at a greater or leſs diſtance, would deſcribe ſimilar Quadrants, are as the times of the revolutions in circles, that is, in the ſeſquiplicate Ratio of the diſtances: Whence the diurnal Areas eſtimated in centeſimal parts of the Quadrant (which parts we put for meaſures of the mean motion, like degrees of Anomaly) are in each, in the ſeſquialter Ratio of the diſtance from the Sun in the Perihelion.

Theſe things being neceſſarily premiſed, let it be propoſed to compute the apparent place of any one of the forementioned Comets for any given time.

1st. *Let the Sun's place be had, and the log. of its diſtance from the Earth.*

2d. *Take the difference between the given time and the time of the Perihelion, taken from the eighth column of the Elements, in days and decimal parts of a day: To the Logarithm of this number, let there be added the conſtant Logarithm* 9,960128, *and the complement arithmetical of once and a half the Logarithm of the diſtance of the Perihelion from the Sun: Their Sum will be the Logarithm of the Comet's mean Motion, to be ſought in the firſt column of the general Table.* But this may be obtained in a ſhorter way, *viz.* by only adding the Logarithm of the time to the Logarithm of the mean diurnal motion taken out of the ſeventh column.

3d. *With the mean Motion, let there be taken the correſpondent Angle from the Perihelion in the Table, and the Log. for the diſtance from the Sun: Then if the time be after the Perihelion, in Comets that are direct, add, and in retrograde ones, ſubtract, the Angle thus found, to or from the Perihelion (in col. 4th). Or if the time be before the Perihelion, in direct Comets, ſubtract, and in retrograde ones add, the foreſaid Angle to or from the place of the Perihelion; and ſo we ſhall have the place of the Comet in its Orbit. And to the Log. for the diſtance there found, let there be added the Log. of the diſtance in the Perihelion, (col. 6th) and the Sum will be the Log. of the true diſtance of the Comet from the Sun.*

4th. *The place of the Node, (col. 2) together with the place of the Comet in its Orbit being given, let the diſtance of the Comet from the Node be found; then the Inclination of the Plane being given, (col. 3) there will be given alſo, from the common rules of Trigonometry, the Comet's place reduced to the Ecliptic, the Inclination, or heliocentric Latitude, and the Log. of the curtate diſtance.*

5th. *From theſe things given, by the very ſame rules that we find the Planet's places, from the Sun's place and diſtance given, we may obtain the apparent or geocentric place of the Comet, together with the apparent Latitude. And this it may be proper to illuſtrate by an Example or two.*

EXAMPLE I.

Let it be required to find the place of the Comet of the year $166\frac{4}{5}$, March 1^{d}. 7^{h}. 00^{m}, P. M. London. *That is* 96^{d}. 19^{h}. 8^{m}, *after the Perihelion, which happened* November 24^{d}. 11^{h}. 52^{m}.

				°	′	″		
Log. diſt. Perihel.	0,011044	Perihel.	♌	10	41	25	Log. for diſt.	0,255369
Log. Seſquial.	0,016566	Ang. correſp.		83	38	05—	Log. Perihel.	0,011044
Comp. Arith.	9,983434	Com. in Orb.	♉	17	3	20	Co-ſin. Incl.	9,990754
	9,960128	Aſcen.	☊ ♊	21	14	00	Log.Curt.diſt.	0,257167
Log. Time	1,985862	Com. à Node		34	10	40	Log. diſt. ☉	9,997939
Log. Me. Mot.	1,929424	Red. to Eclip.		32	19	05	☉ ♓	21.44.33
Mean Mot.	85,001	Com. Helio.	♉	18	54	55	Com.Ap.pl.	♈29.18.20
		Inclin. North.		11	46	40	Ap. lat.	8.36.15N.

EXAMPLE II.

Let it be required to find the place of the Comet of the year 1683, July 23, 33^{h}. 35^{m}, P. M. London. *Or* 13^{h}. 40^{m}, *Equated Time. That is* 21^{d}. 10^{h}. 50^{m}, *after the Perihelion.*

				°	′	″		
Log. diſt. Perihel.	9,748343	Perihel.	♊	25	29	30	Log. for diſt.	0,111336
Log. Seſquial.	9,622514	Ang. correſp.		56	47	20	Log. Perihel.	9,748343
Comp. Arith.	0,377486	Com. in Orb.	♈	28	42	10	Co-ſine Inclin.	9,913187
	9,960128		☊ ♓	23	23	00	Log. Curt. diſt.	9,772866
Log. Time	1,310723	Com. à ☊		35	19	10	Log. diſt. ☉	0,006062
Log. Me. Mot.	1,648337	Red to Eclip.		4	48	30	☉Place ♌	10.39.14
Mean Mot.	44,498	Com. Helioc.	♓	28	11	30	Com. Ap. pl.	♋5.11.28
		Inclin. North.		35	2	00	Lat North.	28.52.13

At the time ſpecified in the firſt Example, 'twas obſerved * from the ſeparate Obſervations of *Azoutio* and *P. Gottignio*, that the apparent place of this Comet, was ſo near the ſecond Star of *Aries*, that it was not above nine or ten minutes more northerly, and as to the Longitude it nearly agreed †. But at the time of the ſecond Example, I myſelf, near *London*, with the ſame Inſtruments whereby I formerly obſerved the ſouthern Conſtellations, found the place of the Comet to be ♋. 5°. 11½, with 28°. 51′ North Latitude, which agreed exactly with the Obſervation made at *Greenwich*, almoſt at the very ſame moment.

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* At *London*.

† According to Dr. *Hook*'s Obſervation it was 3′ to the Eaſt.

As for the Comet of the year 1680, which came almoſt to the Sun itſelf, being in its Perihelion, not above one third of the Sun's Semidiameter diſtance from the ſurface of it, as the Parameter of its Orb is ſo very ſmall, it could hardly be contained within the limits of the general Table, becauſe of the exceſſive velocity of the mean Motion. Wherefore, in this Comet, the beſt way will be, after the mean Motion is found, to get from thence, by the help of the foregoing Equation $z^3 + 3z = \frac{4}{100}$ of the mean Motion, the Tangent of half the Angle from the Perihelion, together with the Log. for the diſtance from the Sun. Which being found, we are to proceed by the ſame Rules as in the preceding.

After this manner therefore, the Aſtronomical Reader may examine theſe Numbers, which I have calculated with all imaginable care, from the Obſervations I could collect. And I have not thought fit to make them public before they have been by myſelf duly examined, and made as accurate as 'twas poſſible, but at the expence of the labour of many years.

Now it may be proper to inform the Reader, that our five Comets, firſt mentioned in the Table, whereof the third and fourth was obſerved by *Peter Apian*, the fifth by *Paulus Fabricius*, as alſo the tenth ſeen by *Michael Mæſtlin* in the year 1596, are not ſo certain as the reſt; for the Obſervations were made neither with ſufficient Inſtruments, nor due care, and on that account are diſagreeing with themſelves, and can by no means be reconciled with a regular computus. The Comet which appeared in the year 1684 was only taken notice of by *Blanchinus*, who obſerved it at *Rome:* And the laſt which appeared in the year 1698, was ſeen only by the *Pariſian* Obſervers, who determined its courſe in a very uncommon manner. This Comet was a very obſcure one, and altho' it moved ſwift, and came near enough to our Earth; yet we, who are not wont to be incurious in theſe matters, ſaw nothing of it. For want of Obſervations I have alſo left out of the foregoing Catalogue, thoſe two remarkable Comets which have happened in this our age, one in *November* 1689, the other in *February* 1702. For they directing their courſes towards the ſouthern parts of the World, and being ſcarce conſpicuous any where in *Europe*, met with no Obſervers proper for this purpoſe.

By comparing together the Elements of the motions of theſe Comets, 'tis apparent their Orbits are diſpoſed in no manner of order; nor can they, as the Planets are, be comprehended within a Zodiac, moving indifferently every way, as well retrograde as direct; from whence it is clear, they are not carried about, or moved in a vortical ſyſtem. Moreover the diſtances in their Perihelia are ſometimes greater, ſometimes leſs; which makes me ſuſpect there may be a far greater number of them, which may move in Regions more remote from the Sun; and being therefore very obſcure, and without tails, may paſs by us unſeen.

Hitherto I have conſidered the Orbits of Comets as exactly parabolical; upon which ſuppoſition it would follow, that Comets, being impelled towards the Sun by a centripetal force, would deſcend as from ſpaces infinitely diſtant; and by their falling acquire ſuch a velocity, as that they may again fly off into the remoteſt parts of the Univerſe, moving upwards with a perpetual tendency, ſo as never to return again to the Sun. But ſince Comets appear frequently enough, and as none of them are found to move with an Hyperbolic Motion, or a motion ſwifter than they might acquire by their gravity towards the Sun, it is highly probable they rather revolve about the Sun in very excentric elliptic Orbits, and make their returns after long periods of time: For ſo their numbers will be determinate, and, perhaps, not ſo very great. Beſides, the ſpace between the Sun and fixed Stars is ſo immenſe, that there is room enough for a Comet to revolve, tho' the period of its revolution be vaſtly long. Now the Parameter of an Ellipſis, is to the Parameter of a Parabola having the ſame Perihelion diſtance, as the Aphelion diſtance in the Ellipſis, is to the tranſverſe Axis in the Ellipſes: And the velocities are in the ſubduplicate Ratio of the Parameters: Which in very excentric Orbits, the Ratio comes very near to a Ratio of Equality: And the very ſmall difference which happens, on account of the greater velocity in the Parabola, is eaſily compenſated in determining the ſituation of the Orbit. The principal uſe therefore of this Table of the Elements of their motions, and that which indeed induced me to conſtruct it, is, that whenever a new Comet ſhall appear, we may be able to know, by comparing together the Elements, whether it be any of thoſe which has appeared before, or not; and conſequently to determine the Axis of its Orbit, its Period, and to foretel its return.

Of the Motion of Comets in Elliptic Orbits.

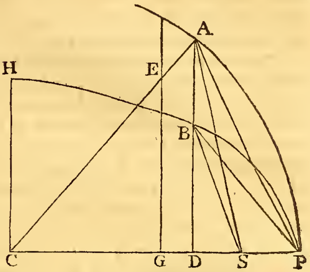
SOON after I had compleated the foregoing Table of Elements (which was many years ago) I ſuſpected, from the like ſituation of their Planes and Perihelions, that the Comets which appeared in the years 1531, 1607, and 1682, were one and the ſame Comet that had made three Revolutions in its Elliptic Orbit. But as the difference of their Periods and Inclinations, was ſomewhat too great, to be reconciled with what I had imagined, and as I judged the Obſervations made by *Apian* and *Kepler* upon the former ones, were not ſufficiently accurate, not to ſay too rude, to determine an affair of ſuch ſubtilty; I was content when I publiſhed at firſt this Synopſis in the year 1705, to hint at theſe my conjectures, as having ſome degree of probability; and to adviſe poſterity carefully to watch for its return about the expected year 1758. But afterwards when I had carefully ſearched into the Catalogues of antient Comets, and diſcovered that three others had preceded the aforeſaid three, manifeſtly in the ſame order, and at like intervals of time (*viz.* in the year 1305 about *Eaſter*, in the year 1380 the month unknown, and laſtly in the month of *June* 1456), I began to be much more confirmed in my former opinion: And having obtained a method by which the calculation may be accurately and eaſily managed for any elliptic Orbit however excentric, inſtead of the parabolic trajectory of the Comet of the year 1682, deſcribed in the Elements, I attempted to reduce its poſition in reſpect to the Plane of the Ecliptic and of the Earth moving in it, unto an Ellipſis of a given magnitude and kind, in whoſe Focus the Sun is placed; ſo that all Mr. *Flamſteed*'s Obſervations on this Comet, taken with a very large and very accurate Sextant, and due corrections being made for the Refractions, might abundantly confirm my Theory ſubjected to the examination of ſo rigid a computation.

Now it is manifeſt that two Periods of this Comet are finiſhed in 151 years nearly, and that each alternately, the greater and the leſs, are compleated in about 76 and 75 years; wherefore taking the mean Period to be 75 years and a half, then (by Prop. 15. Book I. of the Principia) the ſemitranſverſe Axe of the Comet's Orbit is to the mean diſtance of the Earth from the Sun, as $\overline{75\frac{1}{2}}|^{\frac{2}{3}}$, that is as 17,8635 to 1. But having found the perihelion diſtance moſt agreeable to Obſervations to be 0,5825 of thoſe parts, the Excentricity of the Orbit becomes 17,2810, whence half the leſſer Axis is 4,5246. I found the Plane of this Ellipſis to be inclined to the Plane of the Ecliptic in an Angle of 17°. 42′, and to have its aſcending Node in ♉ 20°. 48′; but that the Perihelion of the Comet, which was retrograde in this Plane, was in ♒ 1°. 36′, or 109°. 12′ after the aſcending Node. And that the equated time of the Perihelion was *September* 4^{d}. 21^{h}. 22^{m}. Alſo that its mean diurnal motion was $\frac{1}{75\frac{1}{2}}$ part of the mean diurnal motion of the Sun, or 0°. 0. 47″ as near as can be. And the Radius being 1, the length of the Arc 0′. 47″ that is 0,000227843, is as the diurnal motion of the Comet at the extremity of the leſſer Axis, and has the ſame Ratio to the circumference of a Circle; as one day has to the periodic time, and which the elliptic Area daily intercepted between Rays drawn to the Sun, has to the Area of the whole Ellipſis; which may therefore be very conveniently taken for the meaſure of the Comet's mean Motion. Therefore its Logarithm 6,357636 added to the Logarithm of the time from the Perihelion, gives the Logarithm of the mean Motion for the given time, or of the Ratio of the Area cut off by Rays drawn from the Sun to the Comet's place in its Orbit and to the Perihelion, to the whole Area of the Ellipſis.

But this Area is compounded of two, namely of the Area of a Triangle, whoſe Baſe is the perihelion diſtance of the Comet, the altitude being the correſponding ordinate; and of the Area of a Segment cut off by a chord drawn from the vertex of the Ellipſis to the Comet. Which perhaps to ſome it will be convenient to explain fully by a ſcheme.

Let C P be the greater Semiaxis of the Comet's elliptic Orbit P B H, C H the leſſer Semiaxis, P A a Circle circumſcribing the Ellipſis, and S the Focus; whence P S is the perihelion diſtance, and C S the Excentricity of the Orbit. Let the place of the Comet be in B, from whence draw B D an Ordinate to the Axis, which produced may meet the Circle in A, draw the right Lines A P, A S; B P, B S; and in the right Line C A take C E equal to C S, and draw E G perpendicular to the Axis. Now it is evident, from the approved Diſcoveries of *Kepler*, that the

Area P S A P is to the Area of the whole Circle, and likewiſe P S B P to the Area of the whole Ellipſis, as the time in which the Comet deſcribes the Arc B P to the periodic Time of its making an intire revolution in the Ellipſis. But the Area P S A P is compoſed of the circular Segment A P A and of the Triangle P S A, of which Triangle, P S × A D, the Sine of the Angle A C P, is double; but twice the Segment is the exceſs of the Arc A P above the Sine A D multiplied by the Radius C P. Make the Radius $CP = 1$, and $PS = b$, and any given Area $PASP = a$; and let it be required to find $AD = z$ the Sine of the Anomaly of the Excentric A C P. Now zb is double the Triangle P S A; and according to the known Theorem, the circular Arc $AP = z + \frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$ &c. whence double the Area of the Segment P A P, becomes $\frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$ &c. And therefore $2a = bz + \frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7 +$ &c. Now the Root z of this Equation being extracted, gives the Anomaly of the Excentric A C P, and its verſed Sine P D: And if it be made as C P to C S ſo P D to S G, $PG = SG + PS$ will be equal to B S the diſtance of the Comet from the Sun. Finally ſay as C P is to C H ſo is A D to B D, which will be the Sine of the true Anomaly, or of the Angle P S B to the Radius B S.



But as the method of extracting the Root of this Equation is by no means obvious, and not generally to be done in every caſe but by trials; wherefore to leſſen the trouble of the calculation, I have, according to the principles now laid down, drawn up the following Table, of the ſame form almoſt with the general Table for the parabolic Motion; by means of which, all the Obſervations made at *Greenwich* of the Comet of the year 1682 are fitly enough repreſented.

In compoſing this Table I made uſe of the artifice which *Kepler* did in making his *Rudolphine Tables.* For by making the Angle of the Anomaly of the Excentric A C P to be equally increaſed; in the ſecond column under the title of the mean Motion you have the double of the Area of the mixtilinear ſpace P A S P, compounded of the difference of the Arc A P and Sine A D into the Radius $CP = 1$, and of the Rectangle P S × A D taken together; that is, by taking P S to 1 in the Ratio which half the greater Axis 17,8635 has to 0,5825 the perihelion diſtance; whence P S is 0,0326085, and its Logarithm 8,513331. The fourth column exhibits the Angle P S B of the true Anomaly from the Perihelion; and the ſixth the Logarithm of the Ratio which P S has to the diſtance S B reſpectively. The other columns give the differences of the former, from whence the proportional parts are more readily obtained. But this Table will not hold good in Ellipſes that are not ſimilar to this of ours.

Then follow the Tables.

Here follows an example of this calculation. In the year 1682, *Auguſt* 30^{d}. 7^{h}. 42^{m} equated time at *Greenwich*, it was found, by repeated and accurate Obſervations, that the place of the Comet, the Refraction being ſubducted, was in ♎ 15°. 34′. 42″, and its Latitude 17°. 24′. 56″. Now let us ſee with what ſucceſs our computation will agree with this.

The time propoſed preceded the Perihelion of the Comet 5^{d}. 13^{h}. 40^{m}, or in decimal parts 5,5694 days. The Logarithm of this number 0,745811 added to the Logarithm of the daily Motion 6,357636 gives the Logarithm of the number 0,00126896 for the mean Motion of the Comet before the Perihelion. In the Table I find for 2°. 12′ of the Anomaly of the Excentric, the mean Motion 0,00126120, is leſs than that given, by 776 parts of which 11655 increaſe the Angle from the Perihelion 1°. 31′. 4″, and the Logarithm for the diſtance from the Sun, by the difference 1760: Having added therefore to the Angle 16°. 57′. 55′, and to the Logarithm 0,009396, which in the Table correſpond to that mean Motion, the proportional parts reſpectively, the Angle of the true motion from the Perihelion becomes 17°. 3′. 58″, and the Logarithm for the diſtance from the Sun 0,009513, the Logarithm of that diſtance becomes 9,774809. To the place of the Perihelion which is in ♒ 1°. 36′, add 17°. 3′. 58″, and it will give the place of the Comet in its Orbit in ♒ 18°. 39′. 58″, but reduced to the Ecliptic ♒ 18°. 33′. 36″, with the heliocentric Latitude 17°. 41′. 14″ North; whence the Logarithm of the curtate diſtance is 9,753779. At the ſame time the Sun was in ♍ 17°. 20′. 54″, and the Log. of his diſtance from the Earth 0,002395. From theſe things given it follows that the geocentric place of the Comet was in *Libra* 15°. 35′. 58″, and its Latitude 17°. 24′. 11″, erring in the Longitude 1′. 16″, but in the Latitude only 0′. 45″.

By comparing in this manner the Theory now explained with all the Obſervations of Mr. *Flamſteed*, I have found that the Heavens agreed with this elliptic Motion, the differences not deſerving notice, as appears from the Table annexed.

1682 *App. Time.*				*Comet's Long. by Obſerv.*				*Lat. N. Obſervat.*			*Comet's Long. by Comput.*				*Lat. N. Comput.*			*Differ. Longit.*			*Differ. Latit.*		
	d	h	m		°	′	″	°	′	″		°	′	″	°	′	″		′	″		′	″
Aug.	19	16	38	♌	18	15	5	25	49	19	♌	18	14	19	25	48	33	—	0	46	—	0	46
	20	15	38		24	47	55	26	11	50		24	48	5	26	11	40	+	0	10	—	0	10
	21	8	21		29	37	51	26	15	15		29	39	3	26	18	3	+	1	12	+	2	48
	21	16	19	♍	1	58	0				♍	1	58	23				+	0	23			
	22	8	8		6	30	8	26	4	35		6	32	10	26	6	37	+	2	2	+	2	2
	29	8	20	♎	12	35	55	18	37	27	♎	12	38	19	18	35	3	+	2	24	—	2	24
	30	7	45		15	34	42	17	24	56		15	35	58	17	24	11	+	1	16	—	0	45
Aug.	31	8	21		18	16	20					18	17	30				+	1	10			
Sept.	1	7	33		20	28	12	15	11	37		20	29	31	15	11	23	+	1	19	—	0	14
	4	7	22		25	39	36	12	22	29		25	39	34	12	22	42	—	0	2	+	0	13
	5	7	32		26	58	20	11	31	26		26	57	45	11	33	34	—	0	35	+	2	8
	8	7	16	♎	29	56	0	9	25	31	♎	29	54	40	9	26	26	—	1	20	+	0	55
	9	7	26	♏	0	41	36	8	49	2	♏	0	39	39	8	49	0	—	1	57	—	0	2

Neither did I think it at all neceſſary to beſtow any more trouble on the conſideration of the Orbit of this Comet, ſince the differences we find are not wholly to be attributed to the errors of our numbers, but partly to the Obſervations themſelves, partly to the ſuppoſed places of the fixed Stars which are not abſolutely perfect, more eſpecially on account of the different refractions of the air near the Horizon, by which the Comet was affected all the time of its appearing, it being ſeldom ſeen above 12 degrees high. Beſides theſe differences are not at all greater than what we uſually find in the Theory of the primary Planets, cultivated by the Aſtronomers for ſo many ages. I wiſh we could reduce the motions of *Jupiter* and *Saturn* within as narrow limits.

Now having eſtabliſhed therefore this Orbit, let us examine the path of the Comet which *Kepler* and *Longomontanus* ſay they obſerved in the year 1607; they were certainly great Aſtronomers, but their deſcription is too lax, and not ſufficiently adapted to our examination. Their Obſervations, ſuch as they have left us, you have as follows.

In the year 1607, *Sept.* 16, Old Stile, *Kepler* being at *Prague* ſaw this Comet the firſt time about nine o'clock, or eight at *London*, under the great Bear, and as well as he could judge by its ſituation in reſpect to ſome remote fixed Stars, its place was in *Leo* 18°. 30′, with 35°½ North Latitude. At three the next morning, its diſtance from the hinder knee of the Bear (ψ by *Bayer*) was a little leſs than the diſtance of the two in the nearer foot (λ & μ of the Bear), and by the eye in a track nearly parallel, as it were to a line drawn from the Bear's knee to the ſingle Star in the neck (υ of *Bayer*). Then correcting the places of the Stars (which, I know not by what chance, are very erroneouſly deſcribed in *Tycho*'s Table), the place of the Comet was in *Leo* 21°. 49′. Lat. 36°. 12′ N. when the equated time at *London* was 13^{h}. 51^{m}.

September 18^{d}. 8^{h}. 30^{m} at *Prague*, and 7^{h}. 20^{m} equated time at *London*. The Comet was ſeen to be below the little unformed Star near the *great unformed Star between the tails of the Bear and the Lion*, which then was in 12°. 18′ of *Virgo* with 40°. 33′¼ Lat. from whence it was diſtant by a Diameter of the Moon, in a right line running thro' the laſt in the Bear's tail, and thro' the hand of *Bootes*. Theſe Obſervations place the Comet in ♍ 12°. 2′, with a Latitude of 40°; ſince a diſtance as eſtimated by the eye equal to the Moon's Diameter, muſt be at leaſt 40 minutes.

At *Copenhagen*, *Sept.* 21^{d}. 7^{h}. 30^{m}, that is at 6^{h}. 30^{m} equated time at *London*, *Longomontanus*, by a Sextant of five Cubits Radius, as he ſays, found the Comet to be 30°. 59′ diſtant from the middle of the great Bear's tail, and about the ſame time 16°. 45′ from the bright Star in the *Crown*, by repeated Obſervations. Hence, the places of the fixed Star being adjuſted by the *Britiſh Catalogue*, the Longitude of the Comet comes to be ♎ 16°. 48′, and its Latitude 37°. 12′ North. About the ſame time *Kepler*, in company with a young Pupil, obſerved the Comet to be 6°. 5′ diſtance from *Arcturus*, in a right line running from *Arcturus* to the preceding ſhoulder of *Bootes* (γ by *Bayer*). Whence the place of the Comet was at leaſt in 17°. 0′ of *Libra*.

September 25. An hour after Sun ſet, that is, at *Prague* 6^{h}. 48^{m} at *London* 5^{h}. 36^{m} equated time. The Comet was ſeen a little higher in a right line drawn from *Arcturus* to the bright Star in the *Serpent*'s neck (α) diſtant from it 4°. 30′. But two hours after Sun ſet, or 7^{h}. 37^{m} at *Prague*, it plainly appeared to be above a line drawn from the bottom of the *Serpent*'s neck (δ) to that in the ſtretching out of its neck (β). The firſt Obſervation places the Comet ♏ 12°. 0′; but the other at the ſecond hour, about 12°. 30′ in *Scorpio.*

September 27. The Comet came into a right line drawn from the ſecond Star in the neck of the *Serpent* (δ) to the bright Star in the neck, ſtanding under that Star (ε) which follows the bright one, at the diſtance of the Moon's Diameter or a little more; and a right line drawn from the Comet thro' that Star in its neighbourhood, fell in the middle between the bright Star in the *Crown* and the ſhoulder of *Hercules* (β). Which denotes that the Comet was in ♏ 18°. 50′ with 23°. 20′ North Lat. *Kepler* mentions not the hour, but it ſeems that the Obſervation was not made ſoon in the night, becauſe he ſaw the leſſer Stars. Suppoſe it to be at 6^{h}. 30^{m} at *London* equated time.

October 1^{d}. $6^{h}\frac{1}{2}$. At *Malmoge*, in *Scania*, *Longomontanus* ſaw the Comet at a little leſs than half a degree diſtant from the northern hand of *Serpentarius*; and it was then in a right line with *Arcturus* and the ſoutherly Star in the ſame hand: About the ſame time, *Kepler* ſays, it was a little lower than the right line joining the two Stars of the hand, and diſtant from the neareſt of them about a third part of their diſtance. Both theſe Obſervers, I know not how it happened, are wrong in their deducing the place of the Comet from their own Obſervations; one of them makes it to be in ♏ 25°. 51′, with 17°. 35′ Latitude; the other in ♏ 26°. 30′ with 17°. 40′ Latitude; a great difference, tho' they both nearly agree in the eſtimate they give us of the diſtance and ſituation of the Comet. If, inſtead of the Diameter of the Moon, we put 40′ (as it commonly ſeems to be by a naked eye), and ſuppoſe the Comet in a right line with the Stars of the hand, it would be 23′ more northerly than the neareſt, and 34 min. more weſterly; that is in ♏ 26°. 16′ with 17°. 40′ North Latitude. But by the conſent of both of them it was ſenſibly before this right line, and therefore nearly in ♏ 26°. 0′; which accurately enough brings the Comet into a right line joining *Arcturus* and the Star in the *Southern hand*, as it was obſerved by *Longomontanus.*

October 2. Both theſe Obſervers in the foregoing places denoted the Comet's place in reſpect to the aforeſaid Stars in *the hand. Longomontanus* at a quarter paſt ſix ſaw it in the Vertex of an obtuſe Iſoſceles Triangle with the ſaid Stars, yet it rather inclined to the North of them. But it was in a right line, as it appeared by a ſtretched thread, with the laſt but one on the ſide of the *Crown* (ε) and the northern one in the hand; alſo in another right line with the ſouthern one in the hand, and the loweſt one in the head of *Scorpio* (I ſuſpect *Capricorn*). *Kepler* about the ſame time (for he mentions not the hour) ſaw the Comet in the middle between the two Stars of the hand, but below a right line joining them, and a little higher than a right line drawn from the loweſt of them to the next bend of the *Serpent* (μ of the *Serpent* by *Bayer).* All things conſidered, the place of the Comet was in ♏ 27°. 5′, with 16°. 40′ North Latitude, and 5^{h}. 12^{m} equated time at *London.*

October 5^{d}. 8^{h}. 30^{m}. At *Prague*, *Kepler* with a ſmall inſtrument formerly *Tycho*'s, obſerved the diſtance of the Comet from the knee of *Ophiucus* (η) to be 14°. 14′, and from the preceding ſhoulder of *Hercules* (β) 28°. 56′. Hence the Comet was in ♏ 29°. 47′, with 14°. 2′$\frac{1}{3}$ North Latitude.

October 6^{d}. At the ſame hour it was diſtant from the knee of *Ophiucus* 13°. 22′ and from the ſhoulder of *Hercules* 29°. 27′. Whence its Longitude was ♐ 0°. 33′$\frac{1}{2}$, and its Latitude 13°. 36′$\frac{1}{2}$.

October 9^{d}. 8^{h}. Theſe diſtances were 11°. 22′; and 31°. 19′; and therefore the place of the Comet was in ♐ 2°. 1′ with 11°. 56′ North Latitude.

October 12^{d}. 6^{h}. 31^{m}. At *Copenhagen*, by the agreement of both Obſervers, the place of the Comet was in ♐ 1°. 50′, and 9°. 45′ North Lat. But as this was concluded by the extenſion of threads over remote Stars only, which method of Obſervation is hardly to be depended on in ſmall diſtances, I would not from hence determine that the apparent motion of the Comet was already become retrograde.

October 16^{d}. 6^{h}. 15^{m}. At *Prague*, *Kepler* ſaw this Comet for the laſt time, and that only now and then between the Clouds: It was, ſays he, very low in a vertical Circle which was about the Semidiameter of the Moon more weſterly than the ſame knee (ζ) of *Ophiucus*, and nearly four times as much below the knee, but certainly more than three times, as the diſtance of the two Stars in the hand ſeem to be aſunder. Concerning this Obſervation ſee *Longomontanus*, where he blames *Kepler* for want of due care, in depreſſing the Comet to 6$\frac{1}{2}$°. of Latitude, whereas from the ſaid ſituation of it he computes that it could have no leſs Longitude than ♐ 2°. 10′, nor leſs Latitude than 8°.

Theſe Obſervations I have taken from a little book of *Kepler*'s on Comets, publiſhed in the year 1619 at *Augſburg*; and from an Appendix of *Daniſh* Aſtronomy by *Longomontanus*; and (tho' I wiſh theſe Obſervations had been made with more accuracy, eſpecially towards the end of its appearance) they indeed do indifferently point out the path of this Comet; however they ſufficiently prove that it was one and the ſame Comet with that of the year 1682, by the very ſame argument that we are aſſured that *Mars*, after he has been for ſome time hid under the rays of the Sun, is the ſame Planet as before.

For both Comets were retrograde, and the ſame kind of Orbit is common to both, and the motion of their Nodes and Perihelions is found ſcarcely to differ more than the Orbits of the ſuperior Planets are found to do after the like number of years. But as between the years 1531 and 1607 there are 76 years, I have made the Semiaxis a little greater, *viz.* ſo that it is to the mean diſtance of the Sun as $\overline{76}|^{\frac{2}{3}}$, or as 17,9422 to 1; and I have increaſed its perihelion diſtance proportionally, Obſervations requiring the ſame, ſo that it may be 0,58507, the Logarithm of which is 9,767270. Now it had its aſcending Node

Node in ♉ 17. 48′. 40″, with the inclination of its Plane to the Ecliptic 17°. 20′; but its Perihelion in ♒ 1°. 3′. 40″; and the equated time of its Perihelion *October* 16ᵈ. 21ʰ. 44ᵐ at *London*. Alſo its mean diurnal motion is made the ſeventy ſixth part of the Sun's diurnal motion, or 0,000226344, the Logarithm whereof is 6,354769.

Theſe Elements laid down, I have, by the very ſame method of calculation as in the former, compared the Obſervations made on this Comet, ſuch as they are, with the numbers of my Table; and tho' too great a diverſity may be found in ſome of the latter, yet the candid Reader will readily perceive that it is chiefly owing to the diſagreement of the Obſervations among themſelves.

MDCVII. *Equat. Time.*				*Com. Long. Obſerv.*			*Lat. North Obſervat.*			*Com. Long. Comput.*			*Lat. North Comput.*			*Differ. Long.*			*Differ. Latit.*		
	d	h	m	°	′	″	°	′	″	°	′	″	°	′	″		′	″		′	″
Sept.	16	13	51	♌ 21	49	0	36	12	0	♌ 21	55	56	36	20	4	+	6	56	+	8	4
	18	7	20	♍ 12	2	0	40	0	0	♍ 12	3	15	39	50	0	+	1	15	—	10	0
	21	6	30	♎ 16	48	0	37	12	0	♎ 16	45	13	37	11	2	—	2	47	—	0	58
	25	5	36	♏ 12	12	0				♏ 12	8	47				—	3	13			
	27	6	30	18	50	0	23	20	0	18	44	40	23	16	0	—	5	20	—	4	0
Oct.	1	5	25	26	0	0	17	40	0	25	58	40	17	45	46	—	1	20	+	5	46
	2	5	12	27	5	0	16	40	0	27	7	12	6	44	0	+	2	12	+	4	0
	5	7	15	♏ 29	47	0	14	2	20	♏ 29	39	25	14	5	35	—	7	35	+	3	15
	6	7	15	♐ 0	33	30	13	36	20	♐ 0	14	0	13	22	55	—	19	30	—	13	35
	9	6	45	2	0	50	11	56	0	1	25	7	11	33	48	—	34	43	—	22	12
	12	5	25	1	50	0	9	45	0	2	1	17	10	4	36	+	11	17	+	19	36
	16	5	0	♐ 2	10	0	8	0	0	♐ 2	14	32	8	24	10	+	4	32	+	24	10

Here it falls in our way to obſerve by the bye, that the Nodes of this Comet preceded the Nodes of the Comet of 1682 three degrees, their motion being progreſſive according to the order of the Signs; whilſt its Perihelion advanced only 32′. 20″. But in this ſpace of years the præceſſion of the Æquinoxes is 1°. 2′. 30″; therefore in reſpect of the fixed Stars, the Aphelion went backward half a degree, the Nodes in the mean time going forward 1°. 57′. Whereas in the Planets the Aphelia go forward and the Nodes go backward, becauſe of the centripetal forces of the heavenly bodies, manifeſtly mixing themſelves with the forces of the Sun, and diſturbing them, which otherwiſe would be found to be moſt accurately as the ſquare Root of their diſtances from his Centre; from whence all bodies revolving round that Centre, in quieſcent and immoveable Planes, would deſcribe elliptic Orbits always returning into themſelves. By Prop. 14. Book III. of the Principia. But this Comet is retrograde, whence by the ſame cauſes its Aphelion muſt go backwards and its Node forwards in an immoveable Heaven, by the ſame cauſes I ſay, which make the Nodes of the Planets go backward and their Aphelia forward.

Perhaps

Perhaps ſome may object the diverſity of their inclinations and periods, which is greater than what is obſerved in the revolutions of the ſame Planet; ſeeing one period exceeded the other by more than the ſpace of one year, and the inclination of the Comet of the year 1682 exceeded that of the year 1607 by twenty two intire minutes. But let it be conſidered what I mentioned at the end of the Tables of *Saturn*, where it was proved that one period of that Planet is ſometimes longer than another by thirteen days; and that is evidently occaſioned by the force of gravity tending towards the Center of *Jupiter*, which force indeed in equal diſtances is only the thouſandth part of that force tending to the Sun itſelf, by which the Planets are retained in their Orbits. But by a more accurate computation, the force of *Jupiter* towards *Saturn*, for example, in the great conjunction as they call it, *January* 26 in the year 1683, was found to be to the force of the Sun upon the ſame *Saturn*, as 1 to 186; the ſum of the forces therefore is to the force of the Sun, as 187 to 186. But at the ſame diſtance from the Center, the periodic Times of Bodies revolving in a Circle are in the ſubduplicate Ratio of the forces with which they are urged: Wherefore the gravity being increaſed by the 186th part of itſelf, the periodic Time will be ſhortened by about the 374th part, that is by a whole month in *Saturn*. How much more is a Comet liable to theſe errors, which makes its excurſion near four times higher than *Saturn*; and whoſe velocity being increaſed by leſs than the 120th part of itſelf, would change its elliptic Orbit into a parabolic Trajectory.

But it happened in the ſummer of the year 1681, that the Comet ſeen in the following year, in its deſcent towards the Sun, was in conjunction with *Jupiter* in ſuch a manner, and for ſeveral months ſo near him, that during all that time it muſt have been urged likewiſe towards the Center of *Jupiter* with near the 50th part of that force by which it tended towards the Sun: Whence, according to the theory of gravity, the Arc of the elliptic Orbit, which it would have deſcribed had *Jupiter* been abſent, muſt be bent inwards towards *Jupiter* in an hyperboliform winding, and have aſſumed a kind of Curve very compounded and as hitherto not to be managed by the Geometers; in which the velocity and direction of the moving Body, in proportion to the cauſe, would be very different from what it otherwiſe had in the Ellipſis.

Hence a reaſon may be aſſigned for the change of its inclination: For as the Comet in this part of its path had *Jupiter* on the North almoſt in a perpendicular direction to its path, that portion of its Orbit muſt be bent towards that quarter; and therefore its Tangent being inclined in a greater Angle towards the Plane of the Ecliptic, the Angle of the inclination of the Plane itſelf muſt be neceſſarily increaſed. Beſides the Comet continuing long in the neighbourhood of *Jupiter*, after it had come towards him from parts much more remote from the Sun with a ſlower motion, and now being urged with the joint central forces of both, muſt have acquired more accelerated velocity, than it could loſe in its receſs from *Jupiter*, by forces acting a contrary way, its motion being more ſwift, and the time being leſs: Whence the proper velocity of the Comet being

Rrrr

being increaſed by this exceſs, it is probable that its return will not be untill after the period of 76 years or more, about the end of the year 1758, or the beginning of the next. But having touched upon theſe things, I ſhall leave them to be diſcuſſed by the care of poſterity, after the truth is found out by the event.

That the Comet of the year 1531, obſerved by *Apian*, was the ſame with this now deſcribed, appears from its period, its retrograde motion between the Sun and the Earth, the ſituation of the Perihelion and Nodes, and its inclination, none whereof differ much from the former: Notwithſtanding if any one would undertake accurately to define all of theſe, he would labour in vain, becauſe the Obſervations are ſo very imperfect, being taken with a ſmall inſtrument for Azimuths in a groſs manner, and were only deſigned to ſhew the aſcent of the Comet's tail towards the parts oppoſite to the Sun.

Yet leſt any one ſhould complain that any thing relating to this affair is omitted by us, I have conſulted *Apian*'s book called *Aſtronomicon Cæſareum*, dedicated to the Emperor *Charles* V. after with difficulty I had found it; and I have made the following extract from it, no where elſe publiſhed.

In the year 1531, at *Ingolſtadt* on the *Danube* (in the Latitude 48°. 40'. and Longitude 11°½, or 46 min. of time to the Eaſt of *London*), *Aug*. 13 in the evening *Apian* firſt ſaw the Comet to the North Weſt: And the bright Star *Arcturus* being full Weſt, or in the prime Vertical, as they ſay, the Comet was 7°. 56' high, and 49°. 26' from the Weſt northerly. On the next night, *Aug*. 14, after one revolution of the Heavens, the Comet was 8°. 29' high, being now 45°. 22' northwards. *Aug*. 15, in the ſame ſituation of the Heavens, the Comet was 9° high, and 41°. 22' northerly. *Aug*. 16, it was 9°. 43' high, and only 35°. 13' northerly. *Aug*. 17, it was in the Azimuth of 30°. 46' from the Weſt and 10°. 14' high. *Aug*. 18, it was 10°. 39' high, and 24°. 42' from the Weſt. Afterwards it was for three nights under clouds; and *Aug*. 22, in the ſame ſituation of the ſtarry ſphere, the Comet was 11°. 25' high, and 7°. 34' from the Weſt northerly. Laſtly, *Aug*. 23, *Arcturus* being Weſt, the Comet was more northerly only 3°. 50', and 11°. 25' high.

But the Obſerver ſuppoſes, according to the Aſtronomy of his own age, that *Arcturus* was then in ♎ 16°. 59', with 31°. 30' North Latitude erroneouſly, inſtead of ♎ 17°. 41', and Latitude 30°. 57', as is evident from more certain Obſervations. This being ſubſtituted for the other, the right aſcenſion of the Mid-heaven when *Arcturus* was in the Weſt at *Ingolſtadt* will be 278°. 10'. Hence the Altitudes, due allowances being made for the Refractions, by a calculation more accurate than needs, the places of the Comet will come out as follows.

MDXXXI. Igoldſt. App.time				Comet's Rt. Aſcen.			Comet's Decl. Nor.			Comet's Long. by Obſervat.				Lat. North Obſervat.			Longit. Apian.			Lat. N. by Apian	
	d	h	m	°	′	″	°	′	″		°	′	″	°	′	″		°	′	°	′
Aug.	13	8	26	151	45	45	36	49	25	♌	20	16	0	23	30	10	♌	19	15	23	15
	14	8	22	156	17	20	35	3	50		24	41	30	23	18	45		23	39	23	2
	15	8	19	160	32	50	33	11	50	♌	29	1	0	23	1	30		24	29	22	0
	16	8	15	166	43	20	30	4	30	♍	5	36	15	22	21	40	♍	4	32	22	1
	17	8	11	170	58	40	27	42	25		10	19	40	21	47	0		9	14	21	25
	18	8	7	176	19	30	24	8	50	♍	16	37	0	20	36	15	♍	15	30	20	12
	22	7	54	190	6	30	13	27	10	♎	3	49	0	16	20	40	♎	1	23	16	32
	23	7	50	192	53	30	11	1	20	♎	7	25	30	15	13	40		2	51	14	31

If we compare theſe places one with another, we ſhall ſoon ſee that the diſagreement is very great, without doubt owing to the badneſs of the inſtrument with which they were taken. But in deducing the places from the third and two laſt Obſervations, a very grievous error is committed by *Apian* himſelf. However altho' nothing of certainty or accuracy can be drawn from ſuch uncertain data, yet they are very ſufficient to ſhew that this Comet had its path extremely like that of 1682, and if we add three degrees to its Latitude, almoſt the ſame.

It would be to no purpoſe to compare our numbers with theſe; ſince it is utterly impoſſible that by any regular computation things ſhould be reconciled that are ſo irregular and repugnant among themſelves. But if the periodic Time be made to conſiſt of 75 years, and ſo the greater Semiaxis of the Ellipſis be 17,7845; the perihelion diſtance will be 0,57993; the aſcending Node in ♉ 15°. 30′; the inclination 17°. 00′, and the Perihelion in ♒ 1°. 12′. But the time of the Perihelion, in the year 1531, was *Auguſt* 25^{d}. 19^{h}. 00^{m}; and the mean diurnal motion the ſeventy fifth part of the Sun's diurnal motion, or 0,000229362 whoſe Log. is 6,360522; we may, by means of the ſaid Table, compute the motion of this Comet, and we ſhall for the moſt part find them more agreeable to the Obſervations, than the Obſervations are among themſelves.

You ſee therefore an agreement of all the Elements in theſe three, which would be next to a miracle if they were three different Comets; or if it was not the approach of the ſame Comet towards the Sun and Earth, in three different revolutions in an Ellipſis around them. Wherefore if according to what we have already ſaid it ſhould return again about the year 1758, candid poſterity will not refuſe to acknowledge that this was firſt diſcovered by an *Engliſhman*.

And this Comet is as it were the *Mercury* of the Comets, ſurrounding the Sun with a leſſer Orbit, and ſhorter periodic Time, while all the reſt expatiate more widely, and after very long and more than ſecular revolutions, nay of many ages duration, offer themſelves to the ſight of Men for but a little ſpace of time, to wit, only while being in the neighbourhood of the Sun, they ſhine with

with a ſtronger light, and exhibit ſenſible tails, which is nothing but very rarified vapours raiſed from the matter of the Comet agitated by the force of heat, and thrown upwards with great velocity into the Æther which is almoſt a vacuum. But concerning this phyſical affair, hear what the moſt celebrated *NEWTON* ſays, in his demonſtrative manner, towards the end of the third book of the *Principia.*

Hence it comes to paſs, that we have not the ſame evidence that any other Comets have returned, as we have in this of ours of the year 1682. But if any argument may be drawn from the equality of periods, and from ſimilar phenomena, that wonderful Comet which appeared in the year 1680, was one and the ſame with that of 1106, when *Henry* I. was King of *England*, it firſt emerged out of the Sun's rays " on *Friday*, *February* 16, in the evening, and was ſeen for a long " time afterwards every evening. The Star, which ſeemed little and obſcure, ap- " peared in the South-eaſt. But the Ray which proceeded from it was very clear " and large, ſhining towards the North-eaſt," as we have it recorded in the *Saxon* Chronicle by one who ſeems to have been an eye-witneſs. Now this deſcription agrees very well with that of the Comet of the year 1680, both in reſpect to the length of its tail, and alſo its ſituation in regard to the Sun.

Alſo in the conſulate of *Lampadius* and *Oreſtes* in the year of *Chriſt* 531, when *Juſtinian* was Emperor, another Comet, like this, appeared in the evening, of which *Malela*, the Author of the *Antiochian* Chronicle, perhaps an eye-witneſs alſo, writes thus, " A great and fearful Star appeared in the Weſt, emitting a white beam " upwards, which as it appeared like the flaſhes of lightning, ſome called it *Lampadian:* " It was ſeen for twenty days." I could have wiſhed indeed the Hiſtorian had told us the time of the year this happened. However it is manifeſt that the interval of years between this and that ſeen in the year 1106, is nearly equal to that between the years 1106 and 1681, that is to ſay about 575 years.

And if we reckon backward ſuch another period, we ſhall come to the forty fourth year before *Chriſt*, when, ſoon after the death of *Julius Cæſar*, a very remarkable Comet appeared, mentioned by almoſt all the Hiſtorians of thoſe times, and by *Pliny* in his *Natural Hiſtory*, *Lib.* II. *c.* 24, where we have the words of *Auguſtus Cæſar* himſelf concerning it: By means whereof we are led to the very time and ſituation of this phenomenon in the Heavens; wherefore it will not be amiſs to recite them. " In the very days of my games, a hairy Star " (*Sydus crinitum*) was ſeen for ſeven days, in that part of the Heavens which " is under the Septentriones, it aroſe about the eleventh hour of the day, and " was clearly to be ſeen all over the World." Now *Auguſtus* dedicated theſe his games to *Venus genitrix* (for the *Cæſars* boaſted that they deſcended from the Goddeſs *Venus*), and they began on his birth-day, that is on the 23d of *September*, and continued for ſeven days, as we may learn from a fragment of an old *Roman* Calendar in p. 135, of *Gruter*, the new edition. Now *Cæſar* ſays

ſays the Comet was ſeen all theſe ſeven days, but that does not imply that it was not ſeen before and after thoſe days. And when he ſays the Comet was ſeen under the *Septentriones*, he is not to be underſtood that it was ſeen in the North under the Pole, but under the *ſeptem Triones*, that is below the bright Stars of the *Great Bear*. And that it could be riſen at the eleventh hour of the day can by no means be conceived; wherefore inſtead of the word day it ſhould be read night, or that word ſhould be omitted as it is in *Suetonius*: For the Sun being then near the autumnal Equinox, the eleventh hour at *Rome*, at which the Comet is ſaid to riſe, begun at four in the morning according to our reckoning; ſo that it was judged to riſe between four and five o'clock, or about an hour and half before Sun riſe: So that it preceded the Sun about twenty degrees, which muſt be underſtood about the firſt beginning of its appearance, or at leaſt of the ſeven days mentioned. But at the time it ſhone under *Charles*'s *Wain*, it roſe much ſooner, and had a conſiderable northern Latitude, by its retrograde motion from the Sign *Virgo* to the ſide of *Cancer*; that is, having travelled thro' the intermediate ſpace between *Leo* and the *Bear*.

Now if we reſume the ſituation of the Comet's Orbit of the year 1680, in reſpect of the fixed Stars, and ſuppoſe its Perihelion for the forty fourth year before *Chriſt*, to be about the 18th day of *September*; a computation being any how made, it will preſently appear, that the courſe of the Comet in its aſcent from the Sun, where it projected its tail, and *was a bright Star and conſpicuous all over the World*, ſufficiently agrees with the courſe of this deſcribed by *Auguſtus Cæſar*. It is not therefore unwarrantable to believe that this Comet ſeen by *Cæſar*, having finiſhed three revolutions, again appeared in the year 1680; eſpecially when the like Comets have appeared at equal intervals, *viz.* in the year of *Chriſt* 531 and 1106.

Let us ſuppoſe then that its period is about 575 years. Therefore half the greater Axis of the Ellipſis will be $\overline{575}|^{\frac{2}{3}}$, or 69,14785 of ſuch parts as the mean diſtance of the Earth from the Sun is unity. But the perihelion diſtance in ſuch parts will be 0,006175, very agreeable to what we find it to be by Obſervations, and therefore the conjugate Semiaxis of the Orbit will be 0,92410; or ſuppoſing the greater Semiaxis $= 1$, the perihelion diſtance will be 0,000089301 whoſe Logarithm is 5,950858, and its leſſer Semiaxis 0,0133641 whoſe Logarithm is 8,125939: Theſe foundations being laid, I have made the following Table, of the ſame form almoſt with the preceding: But as this Comet, on account of its vicinity to the Sun, could not be ſeen until the fourth day after the Perihelion, the Table begins at the fifth degree of the excentric Anomaly: Alſo the Angles are reckoned from the Aphelion, and the Logarithms are thoſe of the Ratio's of the true diſtances of the Comet from the Sun, to the mean diſtance of the Sun from the Earth. Moreover I have computed in Decimals of a degree in the former part, that there might not be occaſion for ſecond differences in the interpolation.

Then follows the Table.

As to the poſition of the far extended Plane of this elliptic Orbit, I retain the ſame Nodes as in the parabolic Trajectory above deſcribed, namely 2°. 2′ of *Capricorn* and *Cancer*, with the inclination of 61°. 6′. 48″ to the Plane of the Ecliptic. But the Perihelion of the Comet, which moves in this Plane according to the order of the Signs, falls in ♐ 22°. 44′. 25″, and therefore the Aphelion is in ♊ 22°. 44′. 25″, or 9°. 17′. 35″ before the deſcending Node: I make the equated time of the Perihelion to be *December* 7^{d}. 23^{h}. 9^{m} at *London*; *viz.* in the year 1680. As to its mean diurnal motion it becomes $\frac{1}{575}$ of the Sun's diurnal motion, that is 0,0000299167 whoſe Logarithm is 5,475914, to which if there be added the Logarithm of the time before or after the Perihelion, we ſhall ſoon have the mean motion for any given moment.

Perhaps it may not be amiſs to annex an example of this calculation. In the year 1680, *November* 3, 16^{h}. 47^{m} equated time reduced to the Meridian of *London*, *Gottfried Kirch*, at *Coburg* in *Saxony*, obſerved the Comet in its deſcent towards the Sun, when it was as yet deſtitute of any tail, and as a little white cloud without a Nucleus, ſcarce to be diſcerned by the naked eye, namely when as fortune would have it, he was viewing thro' a Teleſcope the Moon and Stars which were near it. He deſcribed accurately enough the ſituation of this phenomenon among the neighbouring ſmall fixed Stars: Whence, the curious induſtry of the Reverend Mr. *Pound* alſo helping me, I obtained its place in reſpect to the Ecliptic ſufficiently accurate, which was in ♌ 29°. 51′, with 1°. 18′ North Latitude. But concerning this Obſervation ſee the Philoſoph. Tranſact. N° 342.

Now this Obſervation preceded the time of the Perihelion 34^{d}. 6^{h}. 22′, or in decimals of a day 34,2653. Let the Logarithm of this 1,534854 be added to the Logarithm of the mean diurnal motion for the given time 7,010768, and we have 0,001025105. I find in the Table this mean motion between 10°. 24′ and 10°. 36′ of the excentric Anomaly, and by due interpolation the Angle after the Perihelion comes to be 8°. 21′. 37″, and the Logarithm of the Comet's true diſtance from the Sun is 0,061658. To the place of the Aphelion ♊ 22°. 44′. 25″, add 8°. 21′. 37″, and we ſhall have the place of the Comet in its own Orbit in ♋ 1°. 6′. 2″, that is, 0°. 55′. 58″ before the deſcending Node: Hence its heliocentric place reduced to the Ecliptic will be in ♋ 1°. 34′. 58″. with 0°. 49′. 0″ North Latitude: And the Logarithm of the curtate diſtance 0,061614. Now the Sun was at that time in ♏ 22°. 44′. 50″, and the Logarithm of his diſtance from the Earth 9,994672. From which data, if a trigonometrical computation be made in the manner as uſual in the Planets, the geocentric place of the Comet will be in ♌ 29°. 51′. 22″, with 1°. 17′. 32″ of North Latitude, juſt as it was obſerved.

Indeed this Obſervation of *Kerch* is a very noble one, not only that it is prior by 13 days to the Obſervations of all others, but as it is the ſole and only one of many, publiſhed by foreigners on the Comet as ſeen in the morning, to which we may give full belief. How much the ſagacity of *Newton*

Tttt 2

Newton was exerciſed in poliſhing them and comparing them one to another, may be ſeen in the third book of his *Principia.* Which nevertheleſs every where are commonly ſo inconſiſtent one with another, as not taken with due care or proper inſtruments, that we judge them unworthy of further notice here; as thoſe Obſervations, in our opinion, ſhould be tried by the calculation, and not the calculation by them.

But the following Table exhibits a moſt exact ſeries of the motions of the Comet as ſeen in the evenings, in a great meaſure deduced from the Obſervations made with the aforeſaid Sextant at *Greenwich,* and verified as far as could be by it, according to the reformed places of the fixed Stars in the *Britiſh Catalogue.* The laſt two only are *Newton*'s, who very artfully eſtimated the motion of the vaniſhing Comet by the Stars in the *foot of Perſeus.* And a calculation being accurately made according to the premiſed Elements, produced a congruity abundantly ſufficient to ſatisfy the moſt ſcrupulous Calculator.

MDCLXXX. *Equat. Time.*				*Com. Long. Obſerv.*				*Lat. North Obſervat.*			*Com. Long. Comput.*				*Lat. North Comput.*			*Differ. Long.*			*Differ. Latit.*		
	d	h	m		°	′	″	°	′	″		°	′	″	°	′	″		′	″		′	″
Nov.	3	16	47	♌	29	51	0	1	18	0	♌	29	51	22	1	17	32	+	0	22	—	0	28
Dec.	12	4	46	♑	6	32	30	8	28	0	♑	6	31	20	8	29	6	—	1	10	+	1	6
	21	6	37	♒	5	8	12	21	42	13	♒	5	6	14	21	44	42	—	1	58	+	2	29
	24	6	18		18	49	23	25	23	5		18	47	30	25	23	35	—	1	53	+	0	30
	26	5	21	♒	28	24	13	27	0	52	♒	28	21	42	27	2	1	—	2	31	+	1	9
	29	8	3	♓	13	10	41	28	9	58	♓	13	11	14	28	10	38	+	0	33	+	0	40
	30	8	10½	♓	17	38	20	28	11	53	♓	17	38	27	28	11	37	+	0	7	—	0	16
Jan.	3	7	50	♈	2	53	0	27	7	48	♈	2	52	42	27	7	48	—	0	18			
1681.	5	6	1½		8	48	53	26	15	7		8	48	51	26	14	57	—	0	2	—	0	10
	9	7	1		18	44	4	24	11	56		18	43	51	24	12	17	—	0	13	+	0	21
	10	6	6		20	40	50	23	43	32		20	40	23	23	43	25	—	0	27	—	0	7
	13	7	9	♈	25	59	48	22	17	28	♈	26	0	8	22	16	32	+	0	20	—	0	56
	25	7	59	♉	9	35	0	17	56	30	♉	9	34	11	17	56	6	—	0	49	—	0	24
	26	6	50		10	19	0	17	40	30		10	20	14	17	40	29	+	1	14			
Jan.	30	8	22		13	19	51	16	42	18		13	18	28	16	40	5	—	1	23	—	2	13
Feb.	2	6	35		15	13	53	16	4	1		15	11	59	16	2	7	—	1	54	—	1	54
	5	7	4⅓		16	59	6	15	27	3		16	59	17	15	27	0	+	0	11	—	0	3
Mar.	1	11	10	♉	27	52	40	12	23	40	♉	27	51	47	12	22	38	—	0	53	—	1	2
	9	8	38	♊	0	43	4	11	45	52	♊	0	42	43	11	45	35	—	0	21	—	0	17

Let now the Patrons of Vortices and an abſolute Plenum, try whether according to their Hypotheſes, they can delineate the path of this Comet, thro' nine whole Signs and for the ſpace of above four months; and whether any other Curve, or any other law of motion ſenſibly different from ours, can exhibit with the like certainty the peculiar curvature of its path, and its velocities ſo very differently increaſed and diminiſhed. If they cannot do this, let

let them at laſt leave off trifling, give themſelves up to the ſtudy of truth, and ſwear according to the Motto of our *Royal Society*, *Nullius in verba*.

Now this Comet, in that part of its Orbit in which it deſcended towards the Sun, came ſo near the paths of all the Planets, that if by chance it had happened to meet any one of the Planets paſſing by, it muſt have produced very ſenſible effects, and the motion of the Comet would have ſuffered the greateſt diſturbance. In ſuch caſe the plane and ſpecies of its Ellipſis and its periodic Time would have been very much changed, eſpecially from meeting with *Jupiter*. In the late deſcent, the true path of this Comet left the Orbits of *Saturn* and *Jupiter* below itſelf a little towards the South: It approached much nearer to the paths of *Venus* and *Mercury*, and much nearer ſtill to that of *Mars*. But as it was paſſing thro' the plane of the Ecliptic, *viz.* to the ſouthern Node, it came ſo near the path of the *Earth*, that had it come towards the Sun thirty one days later than it did, it had ſcarce left our Globe one Semidiameter of the *Sun* towards the North: And without doubt by its centripetal force (which with the great *Newton* I ſuppoſe proportional to the bulk or quantity of matter in the Comet), it would have produced ſome change in the ſituation and ſpecies of the *Earth*'s Orbit, and in the length of the year. But may the great good GOD avert a ſhock or contact of ſuch great Bodies moving with ſuch forces (which however is manifeſtly by no means impoſſible), leſt this moſt beautiful order of things be intirely deſtroyed and reduced into its antient chaos. But of this by the bye.

Now as it is more than probable that the reſt of the Comets deſcribed in our Catalogue, will return again after having finiſhed their periods, whence their periodic times being given, the Axes, and from thence the ſpecies of their elliptic Orbits will be alſo given; wherefore that I might render the tedioufneſs of the operoſe calculation as eaſy as I could to future Aſtronomers, I have added the following Table, wherein are contained the double Areas of the Segments, the Logarithms of the right and verſed Sines, with their differences, and the verſed Sines themſelves to every fifth part of the degrees of the excentric Anomaly. Now if we make the greater Semiaxis of the Ellipſis to the perihelion diſtance, as unity to a fourth proportional number, and if to the Logarithm of this fourth proportional we add the Logarithms of the right Signs in the Table one by one, or their differences by a continual addition, we ſhall have the double Areas of the Triangles to be added to the double Segments found in the ſecond column, for the mean motions to the excentric Anomalies reſpectively. Afterwards in like manner add the Logarithms of the verſed ſines to the Logarithm of the given Excentricity, and thro' the whole ſeries of numbers anſwering to theſe ſums, let there be added every where the perihelion diſtance, and the reſult will be a Table of the true diſtances of the Comet from the Sun. Finally it will be in every caſe, as the diſtance of the Comet from the Sun, is to the leſſer Axis of the Orbit, ſo is the Sine of the excentric Anomaly, to the Sine of the Angle at the Focus of the Ellipſis.

FINIS.

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Tabulæ generalis conſtructio & uſus — Nnnn 3 & ſeqq.
Tabula motûs cometæ annis 1531, 1607, *&* 1682 *viſi* — Pppp 2 & ſeq.
Tabula motûs cometæ annis 1680 *&* 1681 *viſi* — Ssss 4 & ſeq.
Tabula generalis pro expediendo calculo motûs cometaram in Ellipſibus — Uuuu & ſeqq.
Tabula partium diei decimalium — Uuuu 4
Abacus longitudinum arcuum circularium — ibid.
Catalogus præcipuarum fixarum ad annnm 1720 *ineuntem* — Xxxx & ſeqq.
Tabula Logarithmorum logiſticorum — A *⁎* & ſeqq.
Lunæ meridianæ Aſcenſiones rectæ Grenovici obſervatæ cum computo noſtro collatæ — ☾ b & ſeqq.
Lunæ meridianæ Longitudines Grenovici obſervatæ cum computo noſtro collatæ — ☾ f 4 & ſeqq.

REGISTRUM.

*. (a) (b) (c) (d) (e) (f) Aa. Bb. Cc. Dd. Ee. *Ee. **Ee. Ff. Gg. Hh. Ii. Kk. Ll. Mm. Nn. Oo. Qq. Rr. Ss. Tt. Uu. Xx. Yy. Zz. Aaa. Bbb. Ccc. Ddd. Eee. Fff. Charta ſine litera. Bbbb. Cccc. Dddd. Eeee. Ffff. Gggg. Hhhh. Hhhh 3. Iiii. Kkkk. Llll. Mmmm. Nnnn. Oooo. Pppp. Qqqq. Rrrr. Ssss. Tttt. Uuuu. Xxxx. A*⁎*. B*⁎*. C*⁎*. ☾ b. ☾ c. ☾ d. ☾ e. ☾ f. ☾ g. ☾ h. ☾ i. ☾ k. ☾ l. ☾ m. ☾ n. ☾ o. ☾ p. ☾ q. ☾ r. Charta ſine litera.

Charta O o ſex paginas continet, cæteræ omnes quatuor.

Errata.			Errores.				Correctiones.			
In Tabulis Mediorum Mot. Lunæ.			s	°	′	″	s	°	′	″
	Maii 16.	———————	11	21	59	53	11	21	59	23
In Obſervationum Tabulis.										
1723.	Jul. 14.	Lunæ tranſitus		19^h	12	22		19	12	30
1725.	Mar. 11.	Aſcenſio Recta obſ.		112	29	57		112	29	0
	Sept. 5.	Aſcenſ. rect. comp.		290	59	40		290	57	8
	Oct. 11.	Aſcenſ. rect. comp.		43	57	48		43	53	53
	Nov. 2.	Lunæ tranſitus		6^h	28	8		6	38	8
	Dec. 2.	Lunæ tranſitus	2^d	6	0	9	1^d	6	0	9
1726.	Mar. 30.	Longit. Lunæ comp.	♌	7	19	9	♌	7	15	51
	Aug. 20.	Error Computi		+	0	43		—	0	43
1728.	Apr. 2.	Longit. Lunæ comp.	♊	8	48	44	♊	8	46	44
1730.	Maii 11.	Longit. Lunæ comp.	♌	4	2	18	♌	3	58	0
	Dec. 5.	Lunæ tranſitus		5	57	16		5	58	16
1731.	Sept. 2.	Longit. Lunæ comp.	♒	27	47	45	♒	20	47	45
	9.	Longit. Lunæ obſ.	♊	7	11	34	♊	6	11	34
1732.	Sept. 21.	Longit. Lunæ obſ.	♓	14	14	18	♓	24	14	18
———	———	——— comp.	♓	14	8	10	♓	24	8	10
	Nov. 15.	Longit. Lunæ comp.	♓	25	25	26	♓	25	22	26
1733.	Jun. 20.	Lunæ tranſitus		15	21	29		15	51	29
	Jul. 7.	Longit. Lunæ obſ.	♎	22	41	53	♎	23	41	53
	Nov. 4.	Error Computi		+	0	29		—	0	29
1734.	Jan. 31.	Diſtantia ☽ à ☉		8	3	33		3	8	33
	Feb. 27.	Longit. Lunæ comp.	♉	25	50	40	♉	26	50	40
	Apr. 12.	Lunæ tranſitus		16	43	43		16	33	43
	Maii 13.	Longit. Lunæ comp.	♒	15	21	59	♒	25	21	59

TABULARUM
ASTRONOMICARUM
PARS PRIOR
MOTUS SOLIS LUNÆ
ET
PLANETARUM QUINQUE
EXHIBENS.

DIFFERENTIÆ TEMPORIS MERIDIANI, ET LONGITUDINES ab Obſervatorio Grenovicenſi; tum etiam Latitudines Urbium & Locorum aliquot inſignium.

Locorum nomina	*Diff. temp.*			*Longitudines.*				*Latitudines.*			
	H.	M.	S.	°	′	″		°	′	″	
Alexandria *Ægypti*	2	1	6	30	16	30	Or	31	7	0	S
Alexandria ad Iſſum. *Alexandretta.*	2	25	20	36	20	0	Or	36	35	10	S
Aracta. *Racca.*	2	35	20	38	50	0	Or	36	1	0	S
Argentoratum. *Straſburgh*	0	31	5	7	46	15	Or	48	34	35	S
Athenæ	1	35	30	23	52	30	Or	38	5	0	S
Babylon	2	51	6	42	46	30	Or	33	0	0	S
Babylon, *Ægypti. Cairo.*	2	5	45	31	26	15	Or	30	2	30	S
Bagdad	2	55	6	43	46	30	Or	33	21	0	S
Balaſora, *apud Ind. orient.*	5	44	0	86	0	0	Or	21	20	0	S
Berolinum.	0	53	50	13	27	30	Or	52	33	0	S
Bonæ ſpei promontorium	1	8	0	17	0	0	Or	34	15	0	M
Bononia	0	46	28	11	37	0	Or	44	30	0	S
Buenos Ayres	3	52	20	58	5	0	Occ	34	35	0	M
Byzantium	1	55	32	28	53	0	Or	41	0	0	S
Carthagena, *Americ.*	5	0	46	75	11	30	Occ	10	26	0	S
Cayenna, *Inſ. Americ.*	3	51	20	57	50	0	Occ	4	56	0	S
Eboracum novum	4	56	36	74	9	0	Occ	40	40	0	S
Fruenburgum	1	20	30	20	7	30	Or	54	22	15	S
Gades. *Cadiz.*	0	24	28	6	7	0	Occ	36	33	30	S
Gedanum. *Dantzic.*	1	15	12	18	48	0	Or	54	22	0	S
Goa, *apud Ind. orient.*	4	55	0	73	45	0	Or	15	31	0	S
Hafnia. *Copenhagen.*	0	51	0	12	45	0	Or	55	40	45	S
$D^{\text{væ}}$ Helenæ *Inſ.*	0	24	0	6	0	0	Occ	15	55	0	M
Hieroſolyma	2	21	20	35	20	0	Or	31	55	0	S
Lima, *Peruv.*	5	8	16	77	4	0	Occ	12	2	35	S
Londinum, *ad Divi Pauli.*	0	0	20	0	5	0	Occ	51	30	40	S
Lutetiæ, *ad Obſervatorium.*	0	9	20	2	20	0	Or	48	50	10	S
Macao, *Sinarum.*	7	35	4	113	46	0	Or	22	12	44	S
Maſſilia. *Marſeille.*	0	21	29	5	22	15	Or	43	17	45	S
Matritum	0	14	58	3	44	30	Occ	40	25	0	S

Locorum nomina	*Diff. temp.*			*Longitudines.*				*Latitudines.*			
	H.	M.	S.	°	′	″		°	′	″	
Moſcua	2	41	20	40	20	0	Or	55	36	0	S
Neapolis	0	58	40	14	40	0	Or	40	50	45	S
Norimberga	0	44	16	11	4	0	Or	49	26	0	S
OBSERVATORIUM reg. Gren v.	0	0	0	0	0	0		51	28	30	S
Ocrinum prom. *The Lizard*	0	19	0	4	45	0	Occ	49	55	0	S
Olyſſipo. *Liſbon.*	0	36	50	9	12	30	Occ	38	42	30	S
Oxonium	0	5	4	1	16	0	Occ	51	45	0	S
Patavium	0	47	42	11	55	30	Or	45	22	26	S
Pekin, *Sinarum.*	7	45	20	116	20	0	Or	39	54	0	S
Petropolis. *St Peterſburgh.*	2	1	20	30	20	0	Or	60	0	0	S
Porto belo, *Americ.*	5	19	20	79	50	0	Occ	9	33	5	S
Praga *Bohemiæ*	0	59	0	14	45	0	Or	50	4	30	S
Quito, *Urbs Americ.*	5	13	20	78	20	0	Occ	0	13	11	M
Roma	0	50	0	12	30	0	Or	41	54	0	S
Rupella. *Rochelle*	0	5	4	1	16	0	Occ	46	9	43	S
Sherburne Caſtle	0	4	0	1	0	0	Occ	51	39	25	S
Smyrna	1	49	19	27	19	45	Or	38	28	7	S
Tenerifa mons	1	6	12	16	33	0	Occ	28	23	27	S
Terra del Gada, *in Inſ. Madagaſcar*	2	58	0	44	30	0	Or	19	29	0	M
Theſſalonica	1	32	32	23	8	0	Or	40	41	10	S
Tornea, *Laponiæ*	1	35	15	23	48	45	Or	65	50	50	S
Venetiæ	0	48	18	12	4	30	Or	45	25	0	S
Vienna, *Auſtriæ*	1	5	30	16	22	30	Or	48	12	48	S
Vindana portus. *Breſt.*	0	18	3	4	30	45	Occ	48	23	0	S
Vitenberga. *Witemberg.*	0	50	14	12	33	30	Or	51	43	10	S
Upſal	1	11	0	17	45	0	Or	59	51	50	S
Uraniburgum	0	51	26	12	51	30	Or	55	54	15	S
Wanſtead	0	0	10	0	2	30	Or	51	34	0	S

TAB. DECL.

TABULA DECLINATIONUM PUNCTORUM ECLIPTICÆ.

Sig. Gr.	*Arietis.* *Libræ.* gr. ′ ″	*Diff.* ′ ″	*Tauri.* *Scorpii.* gr. ′ ″	*Diff.* ′ ″	*Geminorum* *Sagittarii.* gr. ′ ″	*Diff.* ′ ″	 Gr.
0	0 0 0		11 29 33		20 11 15		30
1	0 23 54	23 54	11 50 35	21 2	20 23 48	12 33	29
2	0 47 48	23 54	12 11 26	20 51	20 35 59	12 11	28
3	1 11 42	23 53	12 32 4	20 38	20 47 47	11 48	27
4	1 35 34	23 52	12 52 31	20 27	20 59 12	11 25	26
5	1 59 25	23 51	13 12 44	20 13	21 10 14	11 2	25
6	2 23 14	23 49	13 32 45	20 1	21 20 52	10 38	24
7	2 47 1	23 47	13 52 32	19 47	21 31 7	10 15	23
8	3 10 45	23 44	14 12 5	19 33	21 40 57	9 50	22
9	3 34 26	23 41	14 31 24	19 19	21 50 23	9 26	21
10	3 58 4	23 38	14 50 28	19 4	21 59 25	9 2	20
11	4 21 38	23 34	15 9 17	18 49	22 8 2	8 37	19
12	4 45 9	23 31	15 27 51	18 34	22 16 14	8 12	18
13	5 8 34	23 25	15 46 9	18 18	22 24 0	7 46	17
14	5 31 55	23 21	16 4 11	18 2	22 31 20	7 20	16
15	5 55 11	23 16	16 21 57	17 46	22 38 16	6 56	15
16	6 18 21	23 10	16 39 26	17 29	22 44 45	6 29	14
17	6 41 26	23 5	16 56 37	17 11	22 50 48	6 3	13
18	7 4 23	22 57	17 13 31	16 54	22 56 25	5 37	12
19	7 27 15	22 52	17 30 7	16 36	23 1 36	5 11	11
20	7 49 59	22 44	17 46 25	16 18	23 6 20	4 44	10
21	8 12 36	22 37	18 2 24	15 59	23 10 38	4 18	9
22	8 35 5	22 29	18 18 3	15 39	23 14 28	3 50	8
23	8 57 26	22 21	18 33 24	15 21	23 17 52	3 24	7
24	9 19 39	22 13	18 48 25	15 1	23 20 49	2 57	6
25	9 41 43	22 4	19 3 5	14 40	23 23 19	2 30	5
26	10 3 37	21 54	19 17 25	14 20	23 25 22	2 3	4
27	10 25 21	21 44	19 31 25	14 0	23 26 57	1 35	3
28	10 46 56	21 35	19 45 3	13 38	23 28 5	1 8	2
29	11 8 20	21 24	19 58 20	13 17	23 28 46	0 41	1
30	11 29 33	21 13	20 11 15	12 55	23 29 00	0 14	0
	Virginis. *Piscium.*	*Diff.*	*Leonis.* *Aquarii*	*Diff.*	*Cancri.* *Capricorni*	*Diff.*	Gr.

TABULA ASCENSIONUM RECTARUM PUNCTORUM ECLIPTICÆ.

Sig.	*Arietis.*			*Diff.*		*Tauri.*			*Diff.*		*Geminorum*			*Diff.*		
Gr.	*gr.*	′	″	′	″	*gr.*	′	″	′	″	*gr.*	′	″	′	″	Gr.
0	0	0	0			27	54	9			57	48	36			0
1	0	55	2	55	2	28	51	32	57	23	58	51	10	62	34	1
2	1	50	4	55	2	29	49	3	57	31	59	53	53	62	43	2
3	2	45	7	55	3	30	46	44	57	40	60	56	46	62	53	3
4	3	40	11	55	4	31	44	33	57	49	61	59	49	63	3	4
5	4	35	16	55	5	32	42	32	57	59	63	3	2	63	13	5
6	5	30	22	55	6	33	40	41	58	9	64	6	24	63	22	6
7	6	25	31	55	8	34	39	00	58	19	65	9	54	63	30	7
8	7	20	42	55	11	35	37	28	58	28	66	13	33	63	39	8
9	8	15	55	55	13	36	36	6	58	38	67	17	21	63	48	9
10	9	11	11	55	16	37	34	55	58	49	68	21	18	63	56	10
11	10	6	31	55	19	38	33	54	58	59	69	25	22	64	4	11
12	11	1	54	55	23	39	33	3	59	9	70	29	34	64	12	12
13	11	57	20	55	26	40	32	23	59	20	71	33	53	64	19	13
14	12	52	51	55	31	41	31	54	59	31	72	38	19	64	26	14
15	13	48	26	55	35	42	31	35	59	41	73	42	52	64	33	15
16	14	44	5	55	39	43	31	27	59	52	74	47	31	64	39	16
17	15	39	50	55	44	44	31	30	60	3	75	52	16	64	45	17
18	16	35	40	55	50	45	31	43	60	14	76	57	7	64	51	18
19	17	31	36	55	56	46	32	8	60	25	78	2	3	64	56	19
20	18	27	37	56	1	47	32	44	60	36	79	7	4	65	1	20
21	19	23	44	56	7	48	33	30	60	46	80	12	9	65	5	21
22	20	19	58	56	14	49	34	28	60	58	81	17	18	65	9	22
23	21	16	19	56	21	50	35	36	61	8	82	22	30	65	12	23
24	22	12	46	56	27	51	36	55	61	19	83	27	46	65	16	24
25	23	9	20	56	34	52	38	26	61	31	84	33	4	65	18	25
26	24	6	2	56	42	53	40	7	61	41	85	38	24	65	20	26
27	25	2	52	56	50	54	41	58	61	51	86	43	46	65	22	27
28	25	59	50	56	58	55	44	0	62	2	87	49	10	65	24	28
29	26	56	55	57	5	56	46	13	62	13	88	54	35	65	25	29
30	27	54	9	57	14	57	48	36	62	23	90	0	0	65	25	30
	♈			*Diff.*		♉			*Diff.*		♊			*Diff.*		

TABULA ASCENSIONUM RECTARUM PUNCTORUM ECLIPTICÆ.

Sig.	*Cancri.*			*Diff.*		*Leonis.*			*Diff.*		*Virginis.*			*Diff.*	
Gr.	*gr.*	′	″	′	″	*gr.*	′	″	′	″	*gr.*	′	″	′	″
0	90	0	0	65	25	122	11	24	62	23	152	5	51	57	14
1	91	5	25	65	25	123	13	47	62	12	153	3	5	57	5
2	92	10	50	65	24	124	15	59	62	2	154	0	10	56	58
3	93	16	14	65	22	125	18	1	61	52	154	57	8	56	49
4	94	21	36	65	20	126	19	53	61	41	155	53	57	56	42
5	95	26	56	65	18	127	21	34	61	31	156	50	39	56	35
6	96	32	14	65	16	128	23	5	61	19	157	47	14	56	27
7	97	37	30	65	12	129	24	24	61	8	158	43	41	56	21
8	98	42	42	65	9	130	25	32	60	58	159	40	2	56	13
9	99	47	51	65	5	131	26	30	60	46	160	36	15	56	8
10	100	52	56	65	1	132	27	16	60	36	161	32	23	56	1
11	101	57	57	64	56	133	27	52	60	25	162	28	24	55	56
12	103	2	53	64	51	134	28	16	60	14	163	24	20	55	49
13	104	7	44	64	45	135	28	30	60	3	164	20	9	55	45
14	105	12	28	64	39	136	28	33	59	52	165	15	54	55	40
15	106	17	7	64	33	137	28	25	59	41	166	11	34	55	35
16	107	21	40	64	27	138	28	6	59	31	167	7	9	55	31
17	108	26	7	64	19	139	27	37	59	20	168	2	40	55	26
18	109	30	26	64	12	140	26	57	59	9	168	58	6	55	23
19	110	34	38	64	4	141	26	6	58	59	169	53	29	55	20
20	111	38	42	63	56	142	25	5	58	49	170	48	49	55	16
21	112	42	38	63	48	143	23	54	58	38	171	44	5	55	13
22	113	46	26	63	40	144	22	32	58	28	172	39	18	55	11
23	114	50	6	63	30	145	21	0	58	19	173	34	29	55	8
24	115	53	36	63	22	146	19	19	58	8	174	29	37	55	6
25	116	56	58	63	13	147	17	27	57	59	175	24	44	55	5
26	118	0	11	63	03	148	15	26	57	49	176	19	49	55	4
27	119	3	14	62	53	149	13	16	57	40	177	14	53	55	3
28	120	6	7	62	43	150	10	56	57	32	178	9	56	55	2
29	121	8	50	62	34	151	8	28	57	23	179	4	58	55	2
30	122	11	24			152	5	51			180	0	0		
	♋			*Diff.*		♌			*Diff.*		♍			*Diff.*	

TABULA ASCENSIONUM RECTARUM PUNCTORUM ECLIPTICÆ.

Sig.	*Libræ.*	*Diff.*	*Scorpii.*	*Diff.*	*Sagittarii.*	*Diff.*
Gr.	gr. ′ ″	′ ″	gr. ′ ″	′ ″	gr. ′ ″	′ ″
0	180 0 0	55 2	207 54 9	57 23	237 48 36	62 34
1	180 55 2	55 2	208 51 32	57 31	238 51 10	62 43
2	181 50 4	55 3	209 49 3	57 40	239 53 53	62 53
3	182 45 7	55 4	210 46 44	57 49	240 56 46	63 3
4	183 40 11	55 5	211 44 33	57 59	241 59 49	63 13
5	184 35 16	55 6	212 42 32	58 9	243 3 2	63 22
6	185 30 22	55 8	213 40 41	58 19	244 6 24	63 30
7	186 25 31	55 11	214 39 00	58 28	245 9 54	63 39
8	187 20 42	55 13	215 37 28	58 38	246 13 33	63 48
9	188 15 55	55 16	216 36 6	58 49	247 17 21	63 56
10	189 11 11	55 19	217 34 55	58 59	248 21 18	64 4
11	190 6 31	55 23	218 33 54	59 9	249 25 22	64 12
12	191 1 54	55 26	219 33 3	59 20	250 29 34	64 19
13	191 57 20	55 31	220 32 23	59 30	251 33 53	64 26
14	192 52 51	55 35	221 31 54	59 41	252 38 19	64 33
15	193 48 26	55 39	222 31 35	59 52	253 42 52	64 39
16	194 44 5	55 44	223 31 27	60 3	254 47 31	64 45
17	195 39 50	55 50	224 31 30	60 14	255 52 16	64 51
18	196 35 40	55 56	225 31 43	60 25	256 57 7	64 56
19	197 31 36	56 1	226 32 8	60 36	258 2 3	65 1
20	198 27 37	56 7	227 32 43	60 46	259 7 4	65 5
21	199 23 44	56 14	228 33 30	60 58	260 12 9	65 9
22	200 19 58	56 21	229 34 28	61 8	261 17 18	65 12
23	201 16 19	56 27	230 35 36	61 19	262 22 30	65 16
24	202 12 46	56 34	231 36 55	61 31	263 27 46	65 18
25	203 9 20	56 42	232 38 26	61 41	264 33 4	65 20
26	204 6 2	56 50	233 40 7	61 51	265 38 24	65 22
27	205 2 52	56 58	234 41 58	62 2	266 43 46	65 24
28	205 59 50	57 5	235 44 0	62 13	267 49 10	65 25
29	206 56 55	57 14	236 46 13	62 23	268 54 35	65 25
30	207 54 9		237 48 36		270 0 0	
	♎	Diff	♏	Diff	♐	Diff.

TABULA ASCENSIONUM RECTARUM PUNCTORUM ECLIPTICÆ.

Sig.	*Capricorni.*			*Diff.*		*Aquarii.*			*Diff.*		*Piſcium.*			*Diff.*	
Gr.	*gr.*	′	″	′	″	*gr.*	′	″	′	″	*gr.*	′	″	′	″
0	270	00	00	65	25	302	11	24	62	23	332	5	51	57	14
1	271	5	25	65	25	303	13	47	62	12	333	3	5	57	5
2	272	10	50	65	24	304	15	59	62	2	334	0	10	56	58
3	273	16	14	65	22	305	18	1	61	52	334	57	8	56	49
4	274	21	36	65	20	306	19	53	61	41	335	53	57	56	42
5	275	26	56	65	18	307	21	34	61	31	336	50	39	56	35
6	276	32	14	65	16	308	23	5	61	19	337	47	14	56	27
7	277	37	30	65	12	309	24	24	61	8	338	43	41	56	21
8	278	42	42	65	9	310	25	32	60	58	339	40	2	56	13
9	279	47	51	65	5	311	26	30	60	46	340	36	15	56	8
10	280	52	56	65	1	312	27	16	60	36	341	32	23	56	1
11	281	57	57	64	56	313	27	52	60	25	342	28	24	55	56
12	283	2	53	64	51	314	28	16	60	14	343	24	20	55	49
13	284	7	44	64	45	315	28	30	60	3	344	20	9	55	45
14	285	12	28	64	39	316	28	33	59	52	345	15	54	55	40
15	286	17	7	64	33	317	28	25	59	41	346	11	34	55	35
16	287	21	40	64	27	318	28	6	59	31	347	7	9	55	31
17	288	26	7	64	19	319	27	37	59	20	348	2	40	55	26
18	289	30	26	64	12	320	26	57	59	9	348	58	6	55	23
19	290	34	38	64	4	321	26	6	58	59	349	53	29	55	20
20	291	38	42	63	56	322	25	5	58	49	350	48	49	55	16
21	292	42	38	63	48	323	23	54	58	38	351	44	5	55	13
22	293	46	26	63	40	324	22	32	58	28	352	39	18	55	11
23	294	50	6	63	30	325	21	0	58	19	353	34	29	55	8
24	295	53	36	63	22	326	19	19	58	8	354	29	37	55	6
25	296	56	58	63	13	327	17	27	57	59	355	24	44	55	5
26	298	0	11	63	3	328	15	26	57	49	356	19	49	55	4
27	299	3	14	62	53	329	13	16	57	40	357	14	53	55	3
28	300	6	7	62	43	330	10	56	57	32	358	9	56	55	2
29	301	8	50	62	34	331	8	28	57	23	359	4	58	55	2
30	302	11	24			332	5	51			360	0	0		
	♑			*Diff.*		♒			*Diff.*		♓			*Diff.*	

TABULA ANGULORUM ECLIPTICÆ CUM MERIDIANO.

Sig.	Arietis. Libræ.			Diff.		Tauri. Scorpii.			Diff.		Geminorum Sagittarii.			Diff.		
Gr.	gr.	'	"	'	"	gr.	'	"	'	"	gr.	'	"	'	"	Gr.
0	66	31	00			69	22	51			77	44	38			30
				0	11				11	36				21	42	
1	66	31	11			69	34	27			78	6	20			29
				0	35				11	59				21	58	
2	66	31	46			69	46	26			78	28	18			28
				0	57				12	20				22	13	
3	66	32	43			69	58	46			78	50	31			27
				1	21				12	44				22	29	
4	66	34	4			70	11	30			79	13	0			26
				1	43				13	5				22	45	
5	66	35	47			70	24	35			79	35	45			25
				2	6				13	27				22	58	
6	66	37	53			70	38	2			79	58	43			24
				2	30				13	49				23	12	
7	66	40	23			70	51	51			80	21	55			23
				2	52				14	11				23	26	
8	66	43	15			71	6	2			80	45	21			22
				3	15				14	33				23	40	
9	66	46	30			71	20	35			81	9	1			21
				3	38				14	54				23	51	
10	66	50	8			71	35	29			81	32	52			20
				4	1				15	16				24	4	
11	66	54	9			71	50	45			81	56	56			19
				4	24				15	37				24	16	
12	66	58	33			72	6	22			82	21	12			18
				4	47				15	59				24	27	
13	67	3	20			72	22	21			82	45	39			17
				5	10				16	19				24	37	
14	67	8	30			72	38	40			83	10	16			16
				5	33				16	40				24	47	
15	67	14	3			72	55	20			83	35	3			15
				5	55				17	1				24	56	
16	67	19	58			73	12	21			83	59	59			14
				6	19				17	22				25	6	
17	67	26	17			73	29	43			84	25	5			13
				6	41				17	41				25	13	
18	67	32	58			73	47	24			84	50	18			12
				7	4				18	2				25	22	
19	67	40	2			74	5	26			85	15	40			11
				7	28				18	22				25	28	
20	67	47	30			74	23	48			85	41	8			10
				7	49				18	41				25	35	
21	67	55	19			74	42	29			86	6	43			9
				8	13				19	0				25	40	
22	68	3	32			75	1	29			86	32	23			8
				8	36				19	20				25	46	
23	68	12	8			75	20	49			86	58	9			7
				8	58				19	39				25	50	
24	68	21	6			75	40	28			87	23	59			6
				9	21				19	57				25	54	
25	68	30	27			76	0	25			87	49	53			5
				9	44				20	15				25	58	
26	68	40	11			76	20	40			88	15	51			4
				10	6				20	34				26	0	
27	68	50	17			76	41	14			88	41	51			3
				10	28				20	51				26	2	
28	69	0	45			77	2	5			89	7	53			2
				10	52				21	8				26	3	
29	69	11	37			77	23	13			89	33	56			1
				11	14				21	25				26	4	
30	69	22	51			77	44	38			90	0	0			0
	Virginis. Piscium.			Diff.		Leonis. Aquarii.			Diff.		Cancri. Capricorni.			Diff.		Gr.

TABULÆ ÆQUATIONIS TEMPORIS.

Subtrahe ab Apparente.

Locus Solis Verus.

Sig.	♈ ♎	♉ ♏	♊ ♐	
Gr.	′ ″	′ ″	′ ″	
0	0 0	8 23	8 45	30
1	0 20	8 34	8 35	29
2	0 40	8 44	8 24	28
3	1 0	8 53	8 13	27
4	1 19	9 2	8 1	26
5	1 39	9 10	7 48	25
6	1 58	9 17	7 34	24
7	2 18	9 24	7 20	23
8	2 37	9 30	7 6	22
9	2 56	9 35	6 50	21
10	3 15	9 40	6 35	20
11	3 34	9 44	6 18	19
12	3 52	9 48	6 2	18
13	4 11	9 50	5 44	17
14	4 29	9 52	5 27	16
15	4 46	9 54	5 8	15
16	5 4	9 54	4 50	14
17	5 21	9 54	4 31	13
18	5 37	9 53	4 11	12
19	5 54	9 51	3 52	11
20	6 10	9 49	3 32	10
21	6 25	9 46	3 11	9
22	6 40	9 42	2 51	8
23	6 55	9 38	2 30	7
24	7 9	9 33	2 9	6
25	7 23	9 26	1 48	5
26	7 36	9 19	1 26	4
27	7 48	9 12	1 5	3
28	8 1	9 4	0 43	2
29	8 12	8 55	0 22	1
30	8 23	8 45	0 0	0
	′ ″	′ ″	′ ″	*Gr.*
	♓ ♍	♒ ♌	♑ ♋	*Sig.*

Adde ad Apparens.

Subtrahe ab Apparente.

Anomalia Solis Media.

Sig.	0	1	2	3	4	5	
Gr.	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	
0	0 0	3 48	6 39	7 45	6 47	3 57	30
1	0 8	3 55	6 43	7 45	6 43	3 50	29
2	0 16	4 2	6 47	7 45	6 39	3 43	28
3	0 24	4 9	6 51	7 45	6 35	3 35	27
4	0 32	4 16	6 54	7 45	6 30	3 28	26
5	0 40	4 22	6 58	7 44	6 26	3 20	25
6	0 48	4 29	7 1	7 44	6 21	3 13	24
7	0 56	4 35	7 5	7 43	6 16	3 5	23
8	1 3	4 42	7 8	7 42	6 11	2 58	22
9	1 11	4 48	7 11	7 41	6 6	2 50	21
10	1 19	4 54	7 14	7 40	6 1	2 42	20
11	1 27	5 0	7 17	7 39	5 56	2 34	19
12	1 35	5 7	7 19	7 37	5 51	2 27	18
13	1 12	5 12	7 22	7 36	5 45	2 19	17
14	1 50	5 18	7 25	7 34	5 40	2 11	16
15	1 58	5 24	7 27	7 32	5 34	2 3	15
16	2 6	5 30	7 29	7 30	5 28	1 55	14
17	2 13	5 35	7 31	7 28	5 22	1 47	13
18	2 21	5 41	7 33	7 25	5 16	1 39	12
19	2 28	5 46	7 35	7 23	5 10	1 31	11
20	2 36	5 51	7 36	7 20	5 4	1 22	10
21	2 43	5 57	7 38	7 18	4 58	1 14	9
22	2 51	6 2	7 39	7 15	4 51	1 6	8
23	2 58	6 7	7 41	7 12	4 45	0 58	7
24	3 6	6 12	7 42	7 9	4 38	0 50	6
25	3 13	6 17	7 43	7 5	4 32	0 41	5
26	3 20	6 21	7 43	7 2	4 25	0 33	4
27	3 27	6 26	7 44	6 59	4 18	0 25	3
28	3 34	6 30	7 44	6 55	4 11	0 17	2
29	3 41	6 35	7 45	6 51	4 4	0 8	1
30	3 48	6 39	7 45	6 47	3 57	0 0	0
	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	*Gr.*
	11	10	9	8	7	6	*Sig.*

Adde ad Apparens.

TABULA ÆQUATIONIS TEMPORIS COMPOSITÆ, EXISTENTE APOGEO SOLIS in VIII^gr. CANCRI.

Sig.	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
	Add.	*Sub.*	*Sub.*	*Add.*	*Add.*	*Add.*	*Sub.*	*Sub.*	*Sub.*	*Sub.*	*Add.*	*Add.*
Gr.	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
0	7 40	1 9	3 56	1 6	5 49	2 14	7 42	15 32	13 29	1 4	11 38	14 26
1	7 21	1 23	3 52	1 19	5 51	1 58	8 3	15 40	13 13	0 35	11 55	14 20
2	7 2	1 36	3 47	1 33	5 52	1 41	8 24	15 47	12 56	0 5	12 12	14 13
3	6 43	1 49	3 43	1 47	5 53	1 24	8 44	15 53	12 38	+25	12 27	14 6
4	6 24	2 1	3 38	2 0	5 53	1 7	9 4	15 58	12 19	0 54	12 41	13 59
5	6 5	2 13	3 32	2 13	5 52	0 50	9 24	16 2	11 59	1 23	12 54	13 50
6	5 46	2 23	3 25	2 26	5 51	0 32	9 43	16 5	11 38	1 53	13 7	13 41
7	5 27	2 34	3 18	2 38	5 49	0 13	10 3	16 8	11 17	2 22	13 20	13 30
8	5 8	2 44	3 11	2 51	5 47	− 5	10 22	16 10	10 55	2 51	13 32	13 20
9	4 49	2 53	3 3	3 4	5 44	0 24	10 41	16 11	10 33	3 19	13 43	13 9
10	4 30	3 2	2 54	3 16	5 40	0 44	11 0	16 11	10 10	3 48	13 53	12 57
11	4 11	3 10	2 44	3 27	5 35	1 4	11 18	16 11	9 46	4 16	14 2	12 45
12	3 53	3 17	2 35	3 38	5 30	1 24	11 36	16 10	9 22	4 43	14 11	12 33
13	3 34	3 25	2 24	3 50	5 24	1 44	11 53	16 8	8 58	5 11	14 19	12 20
14	3 16	3 32	2 15	4 1	5 17	2 4	12 10	16 5	8 34	5 38	14 25	12 6
15	2 57	3 39	2 4	4 11	5 10	2 24	12 27	16 1	8 8	6 4	14 31	11 52
16	2 39	3 45	1 53	4 21	5 2	2 45	12 43	15 57	7 42	6 30	14 36	11 37
17	2 21	3 50	1 41	4 30	4 54	3 6	12 59	15 52	7 15	6 55	14 40	11 22
18	2 3	3 54	1 29	4 39	4 45	3 27	13 14	15 46	6 48	7 21	14 43	11 7
19	1 45	3 57	1 18	4 48	4 36	3 48	13 29	15 39	6 21	7 45	14 46	10 52
20	1 27	4 0	1 6	4 57	4 26	4 9	13 43	15 32	5 53	8 10	14 48	10 36
21	1 10	4 2	0 53	5 5	4 15	4 30	13 57	15 24	5 25	8 34	14 49	10 19
22	0 53	4 4	0 41	5 12	4 4	4 51	14 10	15 14	4 58	8 57	14 50	10 2
23	0 37	4 6	0 28	5 18	3 52	5 12	14 22	15 3	4 30	9 19	14 50	9 45
24	0 20	4 6	0 15	5 24	3 39	5 34	14 34	14 51	4 1	9 41	14 49	9 28
25	0 4	4 6	0 2	5 31	3 27	5 55	14 46	14 39	3 32	10 2	14 47	9 11
26	−11	4 5	+12	5 36	3 13	6 17	14 56	14 27	3 2	10 23	14 45	8 53
27	0 26	4 4	0 25	5 40	2 59	6 39	15 6	14 14	2 33	10 42	14 41	8 35
28	0 41	4 2	0 39	5 43	2 45	7 0	15 15	14 0	2 3	11 1	14 37	8 17
29	0 56	3 59	0 53	5 46	2 30	7 21	15 24	13 45	1 33	11 20	14 32	7 59
30	1 9	3 56	1 6	5 49	2 14	7 42	15 32	13 29	1 4	11 38	14 26	7 40

Add. & + ſunt addenda Tempori apparenti, } *ut habeatur Tempus medium.*
Sub. & — ſubtrahenda ſunt

EPOCHÆ MEDIORVM MOTVVM SOLIS ET PRIMÆ STELLÆ ARIETIS.

Annis Julianis ineuntibus.	*Anomalia Media Solis.*					*Apog.* ⊙ ♋ 6$^{\text{gr.}}$			*Pr.* ♈$^{\text{is.}}$ ♈ 28°		*Annis Julianis ineuntibus.*	*Anomalia Media Solis.*					*Apog.* ⊙ ♋ 7$^{\text{gr.}}$			1$^{\text{ma}}$ ✱ ♈$^{\text{is.}}$ ♈ 28$^{\text{gr.}}$		
	s.	o.	'	''	'''	o.	'	''	'	''		s.	o.	'	''	'''	o.	'	''	o.	'	''
1661	6	13	26	36	52		58	43	26	50	1696	6	12	22	48	37		34	7		56	0
62	6	13	11	16	29		59	44	27	40	97	6	13	6	36	23		35	7		56	50
63	6	12	55	56	5	7	0	45	28	30	98	6	12	51	16	0		36	8		57	40
64	6	12	40	35	42		1	45	29	20	99	6	12	35	55	37		37	9		58	30
1665	6	13	24	23	29		2	46	30	10	1700	6	12	20	35	13		38	9		59	20
1666	6	13	9	3	6		3	47	31	0	1701	6	13	4	23	0		39	10	29	0	10
67	6	12	53	42	42		4	47	31	50	2	6	12	49	2	37		40	11		1	0
68	6	12	38	22	19		5	48	32	40	3	6	12	33	42	13		41	11		1	50
69	6	13	22	10	6		6	49	33	30	4	6	12	18	21	50		42	12		2	40
1670	6	13	6	49	42		7	49	34	20	1705	6	13	2	9	37		43	13		3	30
1671	6	12	51	29	19		8	50	35	10	1706	6	12	46	49	14		44	13		4	20
72	6	12	36	8	56		9	51	36	0	7	6	12	31	28	50		45	14		5	10
73	6	13	19	56	42		10	51	36	50	8	6	12	16	8	27		46	15		6	0
74	6	13	4	36	19		11	52	37	40	9	6	12	59	56	14		47	15		6	50
1675	6	12	49	15	56		12	53	38	30	1710	6	12	44	35	50		48	16		7	40
1676	6	12	33	55	33		13	53	39	20	1711	6	12	29	15	27		49	17		8	30
77	6	13	17	43	19		14	54	40	10	12	6	12	13	55	4		50	17		9	20
78	6	13	2	22	56		15	55	41	0	13	6	12	57	42	50		51	18		10	10
79	6	12	47	2	33		16	55	41	50	14	6	12	42	22	27		52	19		11	00
1680	6	12	31	42	9		17	56	42	40	1715	6	12	27	2	4		53	19		11	50
1681	6	13	15	29	56		18	57	43	30	1716	6	12	11	41	41		54	20		12	40
82	6	13	0	9	33		19	57	44	20	17	6	12	55	29	27		55	21		13	30
83	6	12	44	49	9		20	58	45	10	18	6	12	40	9	4		56	21		14	20
84	6	12	29	28	46		21	59	46	0	19	6	12	24	48	41		57	22		15	10
1685	6	13	13	16	33		22	59	46	50	1720	6	12	9	28	17		58	23		16	00
1686	6	12	57	56	10		24	0	47	40	1721	6	12	53	16	4		59	23		16	50
87	6	12	42	35	46		25	1	48	30	22	6	12	37	55	41	8	0	24		17	40
88	6	12	27	15	23		26	1	49	20	23	6	12	22	35	17		1	25		18	30
89	6	13	11	3	10		27	2	50	10	24	6	12	7	14	54		2	25		19	20
1690	6	12	55	42	46		28	3	51	0	1725	6	12	51	2	41		3	26		20	10
1691	6	12	40	22	23		29	3	51	50	1726	6	12	35	42	18		4	27		21	00
92	6	12	25	2	0		30	4	52	40	27	6	12	20	21	54		5	27		21	50
93	6	13	8	49	46		31	5	53	30	28	6	12	5	1	31		6	28		22	40
94	6	12	53	29	23		32	5	54	20	29	6	12	48	49	18		7	29		23	30
1695	6	12	38	9	0		33	6	55	10	1730	6	12	33	28	54		8	29		24	20

EPOCHÆ MEDIORVM MOTVVM SOLIS ET PRIMÆ STELLÆ ARIETIS.

Annis Julianis ineuntibus.	Anomalia Media Solis.	Apog.⊙ ♋ 8$^{gr.}$	Pr.♈$^{is.}$ ♈29°	Annis Julianis ineuntibus.	Anomalia Media Solis.	Apog. ⊙ ♋ 8$^{gr.}$	I^{ma}∗♈$^{is.}$ ♈ 29$^{gr.}$
	s. o. ′ ″ ‴	′ ″	′ ″		s. o. ′ ″ ‴	o. ′ ″	o. ′ ″
1731	6 12 18 8 31	9 30	25 10	1766	6 12 13 28 26	44 53	54 20
32	6 12 2 48 8	10 31	26 0	67	6 11 58 8 2	45 54	55 10
33	6 12 46 35 54	11 31	26 50	68	6 11 42 47 39	46 55	56 0
34	6 12 31 15 31	12 32	27 40	69	6 12 26 35 26	47 55	56 50
1735	6 12 15 55 8	13 33	28 30	1770	6 12 11 15 2	48 56	57 40
1736	6 12 0 34 45	14 33	29 20	1771	6 11 55 54 39	49 57	58 30
37	6 12 44 22 31	15 34	30 10	72	6 11 40 34 16	50 57	59 20
38	6 12 29 2 8	16 35	31 0	73	6 12 24 22 2	51 58	0 0 10
39	6 12 13 41 45	17 35	31 50	74	6 12 9 1 39	52 59	♉ 1 0
1740	6 11 58 21 21	18 36	32 40	1775	6 11 53 41 16	53 59	1 50
1741	6 12 42 9 8	19 37	33 30	1776	6 11 38 20 53	55 0	2 40
42	6 12 26 48 45	20 37	34 20	77	6 12 22 8 39	56 1	3 30
43	6 12 11 28 21	21 38	35 10	78	6 12 6 48 16	57 1	4 20
44	6 11 56 7 58	22 39	36 0	79	6 11 51 27 53	58 2	5 10
1745	6 12 39 55 45	23 39	36 50	1780	6 11 36 7 29	59 3	6 0
1746	6 12 24 35 22	24 40	37 40	1781	6 12 19 55 16	9 0 3	6 50
47	6 12 9 14 58	25 41	38 30	82	6 12 4 34 53	1 4	7 40
48	6 11 53 54 35	26 41	39 20	83	6 11 49 14 29	2 5	8 30
49	6 12 37 42 22	27 42	40 10	84	6 11 33 54 6	3 5	9 20
1750	6 12 22 21 58	28 43	41 0	1785	6 12 17 41 53	4 6	10 10
1751	6 12 7 1 35	29 43	41 50	1786	6 12 2 21 30	5 7	11 0
52	6 11 51 41 12	30 44	42 40	87	6 11 47 1 6	6 7	11 50
53	6 12 35 28 58	31 45	43 30	88	6 11 31 40 43	7 8	12 40
54	6 12 20 8 35	32 45	44 20	89	6 12 15 28 30	8 9	13 30
1755	6 12 4 48 12	33 46	45 10	1790	6 12 0 8 6	9 9	14 20
1756	6 11 49 27 49	34 47	46 0	1791	6 11 44 47 43	10 10	15 10
57	6 12 33 15 35	35 47	46 50	92	6 11 29 27 20	11 11	16 0
58	6 12 17 55 12	36 48	47 40	93	6 12 13 15 6	12 11	16 50
59	6 12 2 34 49	37 49	48 30	94	6 11 57 54 43	13 12	17 40
1760	6 11 47 14 25	38 49	49 20	1795	6 11 42 34 20	14 13	18 30
1761	6 12 31 2 12	39 50	50 10	1796	6 11 27 13 57	15 13	19 20
62	6 12 15 41 49	40 51	51 0	97	6 12 11 1 43	16 14	20 10
63	6 12 0 21 25	41 51	51 50	98	6 11 55 41 20	17 15	21 0
64	6 11 45 1 2	42 52	52 40	99	6 11 40 20 57	18 15	21 50
1765	6 12 28 48 49	43 53	53 30	1800	6 11 25 0 33	19 16	22 40

MOTUS ANOMALIÆ MEDIÆ SOLIS AD DIES MENSIUM.

	JANUARII					FEBRUARII					MARTII					APRILIS				
Die Menſis.	*Anomalia media* ⊙					*Anomalia media* ⊙					*Anomalia media* ⊙					*Anomalia media* ⊙				
	s.	°.	′	″	‴	s.	°.	′	″	‴	s.	°.	′	″	‴	s.	°.	′	″	‴
1	0	0	59	8	10	1	1	32	21	14	1	29	8	9	48	2	29	41	22	52
2	0	1	58	16	20	1	2	31	29	23	2	0	7	17	58	3	0	40	31	2
3	0	2	57	24	29	1	3	30	37	33	2	1	6	26	8	3	1	39	39	11
4	0	3	56	32	39	1	4	29	45	43	2	2	5	34	17	3	2	38	47	21
5	0	4	55	40	49	1	5	28	53	53	2	3	4	42	27	3	3	37	55	31
6	0	5	54	48	59	1	6	28	2	3	2	4	3	50	37	3	4	37	3	41
7	0	6	53	57	9	1	7	27	10	12	2	5	2	58	47	3	5	36	11	51
8	0	7	53	5	18	1	8	26	18	22	2	6	2	6	57	3	6	35	20	0
9	0	8	52	13	28	1	9	25	26	32	2	7	1	15	6	3	7	34	28	10
10	0	9	51	21	38	1	10	24	34	42	2	8	0	23	16	3	8	33	36	20
11	0	10	50	29	48	1	11	23	42	52	2	8	59	31	26	3	9	32	44	30
12	0	11	49	37	58	1	12	22	51	1	2	9	58	39	36	3	10	31	52	40
13	0	12	48	46	7	1	13	21	59	11	2	10	57	47	46	3	11	31	0	49
14	0	13	47	54	17	1	14	21	7	21	2	11	56	55	55	3	12	30	8	59
15	0	14	47	2	27	1	15	20	15	31	2	12	56	4	5	3	13	29	17	9
16	0	15	46	10	37	1	16	19	23	41	2	13	55	12	15	3	14	28	25	19
17	0	16	45	18	47	1	17	18	31	50	2	14	54	20	25	3	15	27	33	29
18	0	17	44	26	56	1	18	17	40	0	2	15	53	28	35	3	16	26	41	38
19	0	18	43	35	6	1	19	16	48	10	2	16	52	36	44	3	17	25	49	48
20	0	19	42	43	16	1	20	15	56	20	2	17	51	44	54	3	18	24	57	58
21	0	20	41	51	26	1	21	15	4	30	2	18	50	53	4	3	19	24	6	8
22	0	21	40	59	36	1	22	14	12	39	2	19	50	1	14	3	20	23	14	18
23	0	22	40	7	45	1	23	13	20	49	2	20	49	9	24	3	21	22	22	27
24	0	23	39	15	55	1	24	12	28	59	2	21	48	17	33	3	22	21	30	37
25	0	24	38	24	5	1	25	11	37	9	2	22	47	25	43	3	23	20	38	47
26	0	25	37	32	15	1	26	10	45	19	2	23	46	33	53	3	24	19	46	57
27	0	26	36	40	25	1	27	9	53	28	2	24	45	42	3	3	25	18	55	7
28	0	27	35	48	34	1	28	9	1	38	2	25	44	50	13	3	26	18	3	16
29	0	28	34	56	44	*In Anno* Biſſextili *poſt* Februarium *adde unius diei motum.*					2	26	43	58	22	3	27	17	11	26
30	0	29	34	4	54						2	27	43	6	32	3	28	16	19	36
31	1	0	33	13	4				″	‴	2	28	42	14	42				″	‴
	Mot. Apog.			5	9				9	49				14	57				19	56
	Mot. $*^{\text{rum}}$			4	15				8	5				12	19				16	26

MOTVS ANOMALIÆ MEDIÆ SOLIS AD DIES MENSIVM.

Die Menſis.	MAII					JUNII					JULII					AUGUSTI				
	Anomalia media ☉					Anomalia media ☉					Anomalia media ☉					Anomalia media ☉				
	s.	o.	'	''	'''	s.	o.	'	''	'''	s.	o.	'	''	'''	s.	o.	'	''	'''
1	3	29	15	27	46	4	29	48	40	50	5	29	22	45	44	6	29	55	58	47
2	4	0	14	35	56	5	0	47	48	59	6	0	21	53	53	7	0	55	6	57
3	4	1	13	44	5	5	1	46	57	9	6	1	21	2	3	7	1	54	15	7
4	4	2	12	52	15	5	2	46	5	19	6	2	20	10	13	7	2	53	23	17
5	4	3	12	0	25	5	3	45	13	29	6	3	19	18	23	7	3	52	31	27
6	4	4	11	8	35	5	4	44	21	39	6	4	18	26	33	7	4	51	39	36
7	4	5	10	16	45	5	5	43	29	48	6	5	17	34	42	7	5	50	47	46
8	4	6	9	24	54	5	6	42	37	58	6	6	16	42	52	7	6	49	55	56
9	4	7	8	33	4	5	7	41	46	8	6	7	15	51	2	7	7	49	4	6
10	4	8	7	41	14	5	8	40	54	18	6	8	14	59	12	7	8	48	12	16
11	4	9	6	49	24	5	9	40	2	28	6	9	14	7	22	7	9	47	20	25
12	4	10	5	57	34	5	10	39	10	37	6	10	13	15	31	7	10	46	28	35
13	4	11	5	5	43	5	11	38	18	47	6	11	12	23	41	7	11	45	36	45
14	4	12	4	13	53	5	12	37	26	57	6	12	11	31	51	7	12	44	44	55
15	4	13	3	22	3	5	13	36	35	7	6	13	10	40	1	7	13	43	53	5
16	4	14	2	30	13	5	14	35	43	17	6	14	9	48	11	7	14	43	1	14
17	4	15	1	38	23	5	15	34	51	26	6	15	8	56	20	7	15	42	9	24
18	4	16	0	46	32	5	16	33	59	36	6	16	8	4	30	7	16	41	17	34
19	4	16	59	54	42	5	17	33	7	46	6	17	7	12	40	7	17	40	25	44
20	4	17	59	2	52	5	18	32	15	56	6	18	6	20	50	7	18	39	33	54
21	4	18	58	11	2	5	19	31	24	6	6	19	5	29	0	7	19	38	42	3
22	4	19	57	19	12	5	20	30	32	15	6	20	4	37	9	7	20	37	50	13
23	4	20	56	27	21	5	21	29	40	25	6	21	3	45	19	7	21	36	58	23
24	4	21	55	35	31	5	22	28	48	35	6	22	2	53	29	7	22	36	6	33
25	4	22	54	43	41	5	23	27	56	45	6	23	2	1	39	7	23	35	14	43
26	4	23	53	51	51	5	24	27	4	55	6	24	1	9	49	7	24	34	22	52
27	4	24	53	0	1	5	25	26	13	4	6	25	0	17	58	7	25	33	31	2
28	4	25	52	8	10	5	26	25	21	14	6	25	59	26	8	7	26	32	39	12
29	4	26	51	16	20	5	27	24	29	24	6	26	58	34	18	7	27	31	47	22
30	4	27	50	24	30	5	28	23	37	34	6	27	57	42	28	7	28	30	55	32
31	4	28	49	32	40				''	'''	6	28	56	50	38	7	29	30	3	41
	Mot. Apog.			25	5				30	4				35	13				40	23
	Mot. *^{rum}			20	40				24	46				29	1				33	15

MOTVS ANOMALIÆ MEDIÆ SOLIS AD DIES MENSIVM.

Die Menſis.	SEPTEMBRIS					OCTOBRIS					NOVEMBRIS					DECEMBRIS.				
	Anomalia media ⊙					*Anomalia media* ⊙					*Anomalia media* ⊙					*Anomalia media* ⊙				
	s.	o.	′	″	‴	s.	o.	′	″	‴	s.	o.	′	″	‴	s.	o.	′	″	‴
1	8	0	29	11	51	9	0	3	16	45	10	0	36	29	49	11	0	10	34	43
2	8	1	28	20	1	9	1	2	24	55	10	1	35	37	59	11	1	9	42	53
3	8	2	27	28	11	9	2	1	33	5	10	2	34	46	9	11	2	8	51	3
4	8	3	26	36	21	9	3	0	41	15	10	3	33	54	18	11	3	7	59	12
5	8	4	25	44	30	9	3	59	49	24	10	4	33	2	28	11	4	7	7	22
6	8	5	24	52	40	9	4	58	57	34	10	5	32	10	38	11	5	6	15	32
7	8	6	24	0	50	9	5	58	5	44	10	6	31	18	48	11	6	5	23	42
8	8	7	23	9	0	9	6	57	13	54	10	7	30	26	58	11	7	4	31	52
9	8	8	22	17	10	9	7	56	22	4	10	8	29	35	7	11	8	3	40	1
10	8	9	21	25	19	9	8	55	30	13	10	9	28	43	17	11	9	2	48	11
11	8	10	20	33	29	9	9	54	38	23	10	10	27	51	27	11	10	1	56	21
12	8	11	19	41	39	9	10	53	46	33	10	11	26	59	37	11	11	1	4	31
13	8	12	18	49	49	9	11	52	54	43	10	12	26	7	47	11	12	0	12	41
14	8	13	17	57	59	9	12	52	2	53	10	13	25	15	56	11	12	59	20	50
15	8	14	17	6	8	9	13	51	11	2	10	14	24	24	6	11	13	58	29	0
16	8	15	16	14	18	9	14	50	19	12	10	15	23	32	16	11	14	57	37	10
17	8	16	15	22	28	9	15	49	27	22	10	16	22	40	26	11	15	56	45	20
18	8	17	14	30	38	9	16	48	35	32	10	17	21	48	36	11	16	55	53	30
19	8	18	13	38	48	9	17	47	43	42	10	18	20	56	45	11	17	55	1	39
20	8	19	12	46	57	9	18	46	51	51	10	19	20	4	55	11	18	54	9	49
21	8	20	11	55	7	9	19	46	0	1	10	20	19	13	5	11	19	53	17	59
22	8	21	11	3	17	9	20	45	8	11	10	21	18	21	15	11	20	52	26	9
23	8	22	10	11	27	9	21	44	16	21	10	22	17	29	25	11	21	51	34	19
24	8	23	9	19	37	9	22	43	24	31	10	23	16	37	34	11	22	50	42	28
25	8	24	8	27	46	9	23	42	32	40	10	24	15	45	44	11	23	49	50	38
26	8	25	7	35	56	9	24	41	40	50	10	25	14	53	54	11	24	48	58	48
27	8	26	6	44	6	9	25	40	49	0	10	26	14	2	4	11	25	48	6	58
28	8	27	5	52	16	9	26	39	57	10	10	27	13	10	14	11	26	47	15	8
29	8	28	5	0	26	9	27	39	5	20	10	28	12	18	23	11	27	46	23	17
30	8	29	4	8	35	9	28	38	13	29	10	29	11	26	33	11	28	45	31	27
31				″	‴	9	29	37	21	39				″	‴	11	29	44	39	37
	Mot.Apog.			45	22				50	32				55	31			1	0	40
	Mot. *^{rum}			37	22				41	37				45	44				50	0

MOTVS ANOMALIÆ MEDIÆ ET APOGEI SOLIS, ET FIXARUM AB ÆQVINOCTIO.

IN ANNORVM CENTVRIIS

Annis Julian. Collect.	*Mot. Anom. Mediæ Solis.*					*Mot. Apog. Solis.*			*Fixarum ab Æquinoct.*		
	S.	°.	′	″	‴	°.	′	″	°.	′	″
100	11	29	4	25	20	1	41	7	1	23	20
200	11	28	8	50	40	3	22	13	2	46	40
300	11	27	13	16	0	5	3	20	4	10	0
400	11	26	17	41	20	6	44	27	5	33	20
500	11	25	22	6	40	8	25	33	6	56	40
600	11	24	26	32	0	10	6	40	8	20	0
700	11	23	30	57	20	11	47	47	9	43	20
800	11	22	35	22	40	13	28	53	11	6	40
900	11	21	39	48	0	15	10	0	12	30	0
1000	11	20	44	13	20	16	51	7	13	53	20
1100	11	19	48	38	40	18	32	13	15	16	40
1200	11	18	53	4	0	20	13	20	16	40	0
1300	11	17	57	29	20	21	54	27	18	3	20
1400	11	17	1	54	40	23	35	33	19	26	40
1500	11	16	6	20	0	25	16	40	20	50	0
1600	11	15	10	45	20	26	57	47	22	13	20
1700	11	14	15	10	40	28	38	53	23	36	40
1800	11	13	19	36	0	30	20	0	25	0	0
1900	11	12	24	1	20	32	1	7	26	23	20
2000	11	11	28	26	40	33	42	13	27	46	40
2100	11	10	32	52	0	35	23	20	29	10	0
2200	11	9	37	17	20	37	4	27	30	33	20
2300	11	8	41	42	40	38	45	33	31	56	40
2400	11	7	46	8	0	40	26	40	33	20	0
2500	11	6	50	33	20	42	7	47	34	43	20
2600	11	5	54	58	40	43	48	53	36	6	40
2700	11	4	59	24	0	45	30	0	37	30	0
2800	11	4	3	49	20	47	11	7	38	53	20
2900	11	3	8	14	40	48	52	13	40	16	40
3000	11	2	12	40	0	50	33	20	41	40	0
3100	11	1	17	5	20	52	14	27	43	3	20
3200	11	0	21	30	40	53	55	33	44	26	40

IN HORIS ET MIN.

Motus Anomaliæ Mediæ Solis.							
″	‴	⁗	v	‴	‴	⁗	v
′	″	‴	⁗	″	″	‴	⁗
H.	′	″	‴	′	′	″	‴
1	2	27	50	31	1	16	23
2	4	55	41	32	1	18	51
3	7	23	31	33	1	21	19
4	9	51	22	34	1	23	47
5	12	19	12	35	1	26	14
6	14	47	2	36	1	28	42
7	17	14	53	37	1	31	10
8	19	42	43	38	1	33	38
9	22	10	34	39	1	36	6
10	24	38	24	40	1	38	34
11	27	6	14	41	1	41	1
12	29	34	5	42	1	43	29
13	32	1	55	43	1	45	57
14	34	29	46	44	1	48	25
15	36	57	36	45	1	50	53
16	39	25	27	46	1	53	21
17	41	53	17	47	1	55	48
18	44	21	7	48	1	58	16
19	46	48	58	49	2	0	44
20	49	16	48	50	2	3	12
21	51	44	39	51	2	5	40
22	54	12	29	52	2	8	8
23	56	40	19	53	2	10	36
24	59	8	10	54	2	13	3
25	61	36	0	55	2	15	31
26	64	3	51	56	2	17	59
27	66	31	41	57	2	20	27
28	68	59	31	58	2	22	55
29	71	27	22	59	2	25	23
30	73	55	12	60	2	27	50

TABVLA ÆQVATIONVM SOLIS.

Anomalia media Solis.

	Sig. 0. *Subtr.*	Sig. I. *Subtr.*	Sig. II. *Subtr.*	Sig. III. *Subtr.*	Sig. IV. *Subtr.*	Sig. V. *Subtr.*	
Gr.	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	
0	0 0 0	0 57 7	1 39 41	1 56 19	1 41 48	0 59 15	30
1	0 1 59	0 58 51	1 40 42	1 56 20	1 40 48	0 57 26	29
2	0 3 59	1 0 33	1 41 41	1 56 19	1 39 46	0 55 37	28
3	0 5 58	1 2 15	1 42 39	1 56 16	1 38 41	0 53 48	27
4	0 7 57	1 3 55	1 43 35	1 56 12	1 37 35	0 51 57	26
5	0 9 56	1 5 35	1 44 29	1 56 5	1 36 27	0 50 5	25
6	0 11 55	1 7 14	1 45 21	1 55 56	1 35 17	0 48 13	24
7	0 13 53	1 8 51	1 46 11	1 55 45	1 34 5	0 46 19	23
8	0 15 51	1 10 27	1 47 0	1 55 31	1 32 52	0 44 25	22
9	0 17 49	1 12 1	1 47 46	1 55 15	1 31 37	0 42 30	21
10	0 19 47	1 13 35	1 48 31	1 54 58	1 30 20	0 40 34	20
11	0 21 45	1 15 7	1 49 13	1 54 38	1 29 1	0 38 37	19
12	0 23 42	1 16 38	1 49 53	1 54 16	1 27 41	0 36 40	18
13	0 25 38	1 18 7	1 50 32	1 53 52	1 26 19	0 34 41	17
14	0 27 35	1 19 36	1 51 9	1 53 26	1 24 55	0 32 42	16
15	0 29 30	1 21 3	1 51 44	1 52 58	1 23 30	0 30 43	15
16	0 31 25	1 22 28	1 52 17	1 52 27	1 22 3	0 28 43	14
17	0 33 20	1 23 51	1 52 48	1 51 55	1 20 35	0 26 42	13
18	0 35 14	1 25 14	1 53 16	1 51 20	1 19 5	0 24 41	12
19	0 37 8	1 26 35	1 53 43	1 50 44	1 17 33	0 22 39	11
20	0 39 1	1 27 55	1 54 7	1 50 5	1 16 0	0 20 37	10
21	0 40 53	1 29 13	1 54 30	1 49 24	1 14 26	0 18 34	9
22	0 42 44	1 30 29	1 54 50	1 48 42	1 12 50	0 16 31	8
23	0 44 35	1 31 43	1 55 9	1 47 57	1 11 13	0 14 28	7
24	0 46 25	1 32 56	1 55 25	1 47 11	1 9 34	0 12 24	6
25	0 48 14	1 34 8	1 55 39	1 46 22	1 7 54	0 10 21	5
26	0 50 2	1 35 18	1 55 51	1 45 31	1 6 13	0 8 17	4
27	0 51 50	1 36 26	1 56 1	1 44 38	1 4 31	0 6 13	3
28	0 53 36	1 37 33	1 56 9	1 43 43	1 2 47	0 4 9	2
29	0 55 22	1 38 38	1 56 15	1 42 47	1 1 2	0 2 4	1
30	0 57 7	1 39 41	1 56 19	1 41 48	0 59 15	0 0 0	0
	Sig. XI. *Adde.*	Sig. X. *Adde.*	Sig. IX. *Adde.*	Sig. VIII. *Adde.*	Sig. VII. *Adde.*	Sig. VI. *Adde.*	Gr.

LOGARITHMI DISTANTIARVM SOLIS A TERRA.

Anomalia media Solis.

	Sig. o.	Sig. I.	Sig. II.	Sig. III.	Sig. IV.	Sig. V.	
Gr.	*Logar.*	*Logar.*	*Logar.*	*Logar.*	*Logar.*	*Logar.*	
0	5 007286	5 006347	5 003749	5 000124	4 996405	4 993620	30
1	5 007285	5 006284	5 003640	4 999995	4 996292	4 993555	29
2	5 007282	5 006220	5 003531	4 999867	4 996180	4 993491	28
3	5 007277	5 006154	5 003420	4 999739	4 996069	4 993429	27
4	5 007269	5 006087	5 003307	4 999611	4 995959	4 993369	26
5	5 007260	5 006018	5 003194	4 999483	4 995850	4 993311	25
6	5 007249	5 005946	5 003080	4 999354	4 995742	4 993255	24
7	5 007235	5 005872	5 002965	4 999227	4 995636	4 993201	23
8	5 007218	5 005797	5 002849	4 999099	4 995531	4 993150	22
9	5 007200	5 005720	5 002732	4 998971	4 995427	4 993102	21
10	5 007180	5 005642	5 002614	4 998844	4 995325	4 993055	20
11	5 007158	5 005562	5 002495	4 998717	4 995224	4 993009	19
12	5 007134	5 005480	5 002375	4 998590	4 995126	4 992966	18
13	5 007107	5 005397	5 002254	4 998463	4 995028	4 992926	17
14	5 007079	5 005312	5 002134	4 998336	4 994932	4 992888	16
15	5 007048	5 005225	5 002012	4 998210	4 994836	4 992852	15
16	5 007015	5 005136	5 001890	4 998084	4 994743	4 992818	14
17	5 006980	5 005047	5 001767	4 997960	4 994652	4 992786	13
18	5 006943	5 004956	5 001643	4 997837	4 994562	4 992757	12
19	5 006905	5 004863	5 001518	4 997714	4 994474	4 992731	11
20	5 006864	5 004768	5 001393	4 997591	4 994387	4 992706	10
21	5 006821	5 004672	5 001268	4 997468	4 994302	4 992683	9
22	5 006776	5 004575	5 001142	4 997347	4 994219	4 992663	8
23	5 006730	5 004477	5 001016	4 997226	4 994138	4 992646	7
24	5 006681	5 004377	5 000889	4 997106	4 994058	4 992631	6
25	5 006630	5 004275	5 000762	4 996987	4 993980	4 992618	5
26	5 006577	5 004173	5 000635	4 996868	4 993904	4 992607	4
27	5 006522	5 004069	5 000508	4 996750	4 993831	4 992599	3
28	5 006466	5 003963	5 000380	4 996634	4 993759	4 992593	2
29	5 006408	5 003857	5 000252	4 996519	4 993688	4 992590	1
30	5 006347	5 003749	5 000124	4 996405	4 993620	4 992589	0
	Sig. XI.	Sig. X.	Sig. IX.	Sig. VIII.	Sig. VII.	Sig. VI.	Gr.

EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.

Annis Julianis ineuntibus.

Annis Julianis ineuntibus.	*Temp primæ Conj. Med. in Menſ. Jan.*				*Anomaliæ Media Solis.*				*Solis ab Apog. Lunæ Diſtantia.*				*Solis à Nodo Lunæ Diſtantia*			
	D.	H.	M.	S.	S	°	′	″	S	°	′	″	S	°	′	″
1661	19	20	52	12	7	3	1	37	5	7	8	5	3	19	59	42
62	9	5	40	49	6	22	17	29	3	16	56	10	3	28	2	29
63	28	3	13	28	7	10	39	41	2	22	33	16	5	6	45	30
64	17	12	2	5	6	29	55	33	1	2	21	21	5	14	48	18
65	5	20	50	41	6	19	11	26	11	12	9	26	5	22	51	5
1666	24	18	23	21	7	7	33	37	10	17	46	32	7	1	34	6
67	14	3	11	58	6	26	49	30	8	27	34	37	7	9	36	53
68	3	12	0	34	6	16	5	22	7	7	22	42	7	17	39	40
69	21	9	33	14	7	4	27	33	6	12	59	48	8	26	22	42
70	10	18	21	51	6	23	43	26	4	22	47	53	9	4	25	28
1671	0	3	10	27	6	12	59	18	3	2	35	59	9	12	28	15
72	19	0	43	7	7	1	21	30	2	8	13	4	10	21	11	17
73	7	9	31	43	6	20	37	22	0	18	1	9	10	29	14	5
74	26	7	4	23	7	8	59	34	11	23	38	15	0	7	57	5
75	15	15	53	0	6	28	15	26	10	3	26	20	0	15	59	53
1676	5	0	41	36	6	17	31	19	8	13	14	25	0	24	2	39
77	22	22	14	16	7	5	53	30	7	18	51	31	2	2	45	41
78	12	7	2	53	6	25	9	22	5	28	39	36	2	10	48	28
79	1	15	51	29	6	14	25	15	4	8	27	42	2	18	51	15
80	20	13	24	9	7	2	47	26	3	14	4	47	3	27	34	17
1681	8	22	12	45	6	22	3	19	1	23	52	52	4	5	37	4
82	27	19	45	25	7	10	25	30	0	29	29	58	5	14	20	5
83	17	4	34	2	6	29	41	23	11	9	18	3	5	22	22	52
84	6	13	22	38	6	18	57	15	9	19	6	8	6	0	25	39
85	24	10	55	17	7	7	19	27	8	24	43	14	7	9	8	41
1686	13	19	43	55	6	26	35	18	7	4	31	19	7	17	11	27
87	3	4	32	31	6	15	51	11	5	14	19	25	7	25	14	14
88	22	2	5	11	7	4	13	22	4	19	56	30	9	3	57	16
89	10	10	53	47	6	23	29	14	2	29	44	35	9	12	0	4
90	29	8	26	27	7	11	51	26	2	5	21	41	10	20	43	4
1691	18	17	15	4	7	1	7	19	0	15	9	46	10	28	45	51
92	8	2	3	40	6	20	23	11	10	24	57	51	11	6	48	38
93	25	23	36	19	7	8	45	24	10	0	34	57	0	15	31	40
94	15	8	24	57	6	28	1	14	8	10	23	2	0	23	34	27
1695	4	17	13	33	6	17	17	6	6	20	11	8	1	1	37	14

EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.

Annis Julianis ineuntibus.

Annis Julianis ineuntibus.	*Temp. primæ Conj. Med. in Menſ. Jan.*				*Anomaliæ Media Solis.*				*Solis ab Apog. Lunæ Diſtantia.*				*Solis à Nodo Lunæ Diſtantia.*			
	D.	H.	M.	S.	S	°	′	″	S	°	′	″	S	°	′	″
1696	23	14	46	13	7	5	39	18	5	25	48	13	2	10	20	16
97	11	23	34	49	6	24	55	10	4	5	36	18	2	18	23	3
98	1	8	23	26	6	14	11	2	2	15	24	24	2	26	25	50
99	20	5	56	6	7	2	33	14	1	21	1	29	4	5	8	51
1700	9	14	44	42	6	21	49	7	0	0	49	34	4	13	11	37
1701	27	12	17	21	7	10	11	20	11	6	26	41	5	21	54	40
2	16	21	5	58	6	29	27	12	9	16	14	46	5	29	57	27
3	6	5	54	34	6	18	43	4	7	26	2	51	6	8	0	14
4	25	3	27	14	7	7	5	16	7	1	39	57	7	16	43	15
5	13	12	15	51	6	26	21	8	5	11	28	2	7	24	46	2
1706	2	21	4	27	6	15	37	0	3	21	16	7	8	2	48	49
7	21	18	37	7	7	3	59	12	2	26	53	13	9	11	31	50
8	11	3	25	44	6	23	15	4	1	6	41	18	9	19	34	37
9	29	0	58	23	7	11	37	16	0	12	18	24	10	28	17	39
10	18	9	47	0	7	0	53	8	10	22	6	29	11	6	20	26
1711	7	18	35	36	6	20	9	1	9	1	54	34	11	14	23	14
12	26	16	8	16	7	8	31	12	8	7	31	40	0	23	6	15
13	15	0	56	53	6	27	47	5	6	17	19	45	1	1	9	1
14	4	9	45	29	6	17	2	56	4	27	7	50	1	9	11	49
15	23	7	18	9	7	5	25	9	4	2	44	56	2	17	54	49
1716	12	16	6	46	6	24	41	0	2	12	33	1	2	25	57	37
17	1	0	55	22	6	13	56	54	0	22	21	6	3	4	0	25
18	19	22	28	2	7	2	19	6	11	27	58	12	4	12	43	25
19	9	7	16	38	6	21	34	58	10	7	46	17	4	20	46	13
20	28	4	49	18	7	9	57	10	9	13	23	23	5	29	29	14
1721	16	13	37	54	6	29	13	2	7	23	11	28	6	7	32	2
22	5	22	26	31	6	18	28	54	6	2	59	33	6	15	34	48
23	24	19	59	11	7	6	51	6	5	8	36	39	7	24	17	49
24	14	4	47	48	6	26	6	58	3	18	24	44	8	2	20	36
25	2	13	36	24	6	15	22	50	1	28	12	49	8	10	23	25
1726	21	11	9	4	7	3	45	2	1	3	49	55	9	19	6	25
27	10	19	57	40	6	23	0	55	11	13	38	0	9	27	9	12
28	0	4	46	17	6	12	16	47	9	23	26	6	10	5	11	59
29	18	2	18	57	7	0	38	59	8	29	3	11	11	13	55	1
1730	7	11	7	33	6	19	54	50	7	8	51	16	11	21	57	47

EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.

Annis Julianis ineuntibus.

Annis Julianis ineuntibus.	*Temp. primæ Conj. Med. in Menſ. Jan.*				*Anomaliæ Media Solis.*				*Solis ab Apog. Lunæ Diſtantia.*				*Solis à Nodo Lunæ Diſtantia.*			
	D.	H.	′	″	S	°	′	″	S	°	′	″	S	°	′	″
1731	26	8	40	13	7	8	17	3	6	14	28	22	1	0	40	49
32	15	17	28	50	6	27	32	54	4	24	16	27	1	8	43	36
33	4	2	17	26	6	16	48	47	3	4	4	32	1	16	46	24
34	22	23	50	6	7	5	10	59	2	9	41	38	2	25	29	25
35	12	8	38	43	6	24	26	51	0	19	29	43	3	3	32	12
1736	1	17	27	19	6	13	42	43	10	29	17	48	3	11	34	59
37	19	14	59	58	7	2	4	55	10	4	54	54	4	20	18	1
38	8	23	48	35	6	21	20	47	8	14	42	59	4	28	20	48
39	27	21	21	15	7	9	42	59	7	20	20	5	6	7	3	49
40	17	6	9	52	6	28	58	51	6	0	8	10	6	15	6	36
1741	5	14	58	28	6	18	14	44	4	9	56	16	6	23	9	24
42	24	12	31	8	7	6	36	56	3	15	33	21	8	1	52	25
43	13	21	19	45	6	25	52	48	1	25	21	26	8	9	55	12
44	3	6	8	22	6	15	8	40	0	5	9	31	8	17	58	0
45	21	3	41	00	7	3	30	52	11	10	46	37	9	26	41	1
1746	10	12	29	37	6	22	46	44	9	20	34	42	10	4	43	48
47	29	10	2	17	7	11	8	56	8	26	11	48	11	13	26	49
48	18	18	50	54	7	0	24	48	7	5	59	53	11	21	29	36
49	7	3	39	30	6	19	40	40	5	15	47	58	11	29	32	23
50	26	1	12	10	7	8	2	52	4	21	25	4	1	8	15	24
1751	15	10	0	47	6	27	18	44	3	1	13	9	1	16	18	11
52	4	18	49	24	6	16	34	36	1	11	1	14	1	24	20	58
53	22	16	22	2	7	4	56	48	0	16	38	20	3	3	4	0
54	12	1	10	38	6	24	12	40	10	26	26	25	3	11	6	47
55	1	9	59	15	6	13	28	32	9	6	14	30	3	19	9	34
1756	20	7	31	55	7	1	50	44	8	11	51	36	4	27	52	35
57	8	16	20	32	6	21	6	37	6	21	39	42	5	5	55	23
58	27	13	53	12	7	9	28	49	5	27	16	48	6	14	38	24
59	16	22	41	48	6	28	44	41	4	7	4	53	6	22	41	11
60	6	7	30	25	6	18	0	33	2	16	52	58	7	0	43	58
1761	24	5	3	4	7	6	22	45	1	22	30	4	8	9	26	59
62	13	13	51	41	6	25	38	37	0	2	18	8	8	17	29	46
63	2	22	40	17	6	14	54	29	10	12	6	13	8	25	32	33
64	21	20	12	57	7	3	16	41	9	17	43	19	10	4	15	34
1765	10	5	1	33	6	22	32	34	7	27	31	25	10	12	18	22

EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.

Annis Julianis ineuntibus.

Annis Julianis ineuntibus.	*Temp. primæ Conj. Med. in Menſ. Jan.*				*Anomaliæ Media Solis.*				*Solis ab Apog. Lunæ Diſtantia.*				*Solis à Nodo Lunæ Diſtantia.*			
	D.	H.	′	″	S	°	′	″	S	°	′	″	S	°	′	″
1766	29	2	34	14	7	10	54	46	7	3	8	31	11	21	1	24
67	18	11	22	50	7	0	10	38	5	12	56	36	11	29	4	11
68	7	20	11	27	6	19	26	30	3	22	44	41	0	7	6	58
69	25	17	44	6	7	7	48	41	2	28	21	47	1	15	49	59
70	15	2	32	42	6	27	4	33	1	8	9	52	1	23	52	46
1771	4	11	21	19	6	16	20	25	11	17	57	57	2	1	55	33
72	23	8	53	59	7	4	42	37	10	23	35	3	3	10	38	34
73	11	17	42	35	6	23	58	30	9	3	23	8	3	18	41	22
74	1	2	31	12	6	13	14	23	7	13	11	13	3	26	44	10
75	20	0	3	52	7	1	36	35	6	18	48	19	5	5	27	11
1776	9	8	52	28	6	20	52	27	4	28	36	24	5	13	29	58
77	27	6	25	8	7	9	14	38	4	4	13	30	6	22	12	59
78	16	15	13	44	6	28	30	30	2	14	1	35	7	0	15	46
79	6	10	2	21	6	17	46	22	0	23	49	40	7	8	18	33
80	24	21	35	0	7	6	8	34	11	29	26	46	8	17	1	34
1781	13	6	23	37	6	25	24	27	10	9	14	51	8	25	4	21
82	2	15	12	14	6	14	40	18	8	19	2	55	9	3	7	8
83	21	12	44	54	7	3	2	30	7	24	40	1	10	11	50	9
84	10	21	33	31	6	22	18	22	6	4	28	6	10	19	52	56
85	28	19	6	10	7	10	40	35	5	10	5	12	11	28	35	58
1786	18	3	54	47	6	29	56	27	3	19	53	17	0	6	38	45
87	7	12	43	23	6	19	12	19	1	29	41	23	0	14	41	32
88	26	10	16	3	7	7	34	31	1	5	18	28	1	23	24	34
89	14	19	4	39	6	26	50	23	11	15	6	34	2	1	27	21
90	4	3	53	16	6	16	6	15	9	24	54	39	2	9	30	8
1791	23	1	25	56	7	4	28	27	9	0	31	44	3	18	13	10
92	12	10	14	33	6	23	44	19	7	10	19	50	3	26	15	57
93	0	19	3	9	6	13	0	12	5	20	7	55	4	4	18	45
94	19	16	35	49	7	1	22	24	4	25	45	0	5	13	1	46
95	9	1	24	25	6	20	38	16	3	5	33	6	5	21	4	33
1796	27	22	57	5	7	9	0	28	2	11	10	11	6	29	47	34
97	16	7	45	41	6	28	16	19	0	20	58	17	7	7	50	21
98	5	16	34	18	6	17	32	11	11	0	46	22	7	15	53	8
99	24	14	6	57	7	5	54	23	10	6	23	28	8	24	36	10
1800	13	22	55	34	6	25	10	15	8	16	11	33	9	2	38	57

REVOLUTIONES LUNÆ AD SOLEM IN MENSIBUS ANNI COMMUNIS.

Dies Coll.						*Anomalia Media Solis.*				*Solis ab Apog. Lunæ Diſtantia.*				*Solis à Nodo Lunæ Diſtantia.*			
		D.	H.	M.	S.	S	°	′	″	S	°	′	″	S	°	′	″
29	Januarii	29	12	44	3	0	29	6	19	0	25	49	0	1	0	40	14
59	Februarii	28	1	28	6	1	28	12	39	1	21	38	1	2	1	20	28
88	Martii	29	14	12	9	2	27	18	58	2	17	27	1	3	2	0	42
118	Aprilis	28	2	56	12	3	26	25	17	3	13	16	2	4	2	40	56
147	Maii	27	15	40	15	4	25	31	37	4	9	5	2	5	3	21	10
177	Junii	26	4	24	18	5	24	37	56	5	4	54	3	6	4	1	24
206	Julii	25	17	8	21	6	23	44	15	6	0	43	3	7	4	41	38
236	Auguſti	24	5	52	24	7	22	50	35	6	26	32	3	8	5	21	51
265	Septembris	22	18	36	27	8	21	56	54	7	22	21	4	9	6	2	5
295	Octobris	22	7	20	30	9	21	3	14	8	18	10	4	10	6	42	19
324	Novembris	20	20	4	34	10	20	9	33	9	13	59	5	11	7	22	33
354	Decembris	20	8	48	37	11	19	15	52	10	9	48	5	0	8	2	47
	½ Menſ. Synod.	14	18	22	2	0	14	33	10	0	12	54	30	0	15	20	7

In Anno Biſſextili poſt Februarium deme diem de dierum numero in Tabellâ, motus verò medii non mutentur.

MOTUS MEDII LUNÆ A SOLE AD HORAS, &c.

	Mot. M. ☽ à ⊙				Mot. M. ☽ à ⊙		
S. M. H.	″ ′ °	‴ ″ ′	‴ ″	S. M.	′ °	″ ′	‴ ″
1	0	30	29	31	0	15	45
2	1	0	57	32	0	16	15
3	1	31	26	33	0	16	46
4	2	1	54	34	0	17	16
5	2	32	23	35	0	17	47
6	3	2	52	36	0	18	17
7	3	33	20	37	0	18	48
8	4	3	49	38	0	19	18
9	4	34	17	39	0	19	49
10	5	4	46	40	0	20	19
11	5	35	15	41	0	20	50
12	6	5	43	42	0	21	20
13	6	36	12	43	0	21	50
14	7	6	41	44	0	22	21
15	7	37	9	45	0	22	51
16	8	7	38	46	0	23	22
17	8	38	6	47	0	23	52
18	9	8	35	48	0	24	23
19	9	39	4	49	0	24	53
20	10	9	32	50	0	25	24
21	10	40	1	51	0	25	54
22	11	10	29	52	0	26	25
23	11	40	58	53	0	26	55
24	12	11	27	54	0	27	26
25	12	41	55	55	0	27	56
26	13	12	24	56	0	28	27
27	13	42	53	57	0	28	57
28	14	13	21	58	0	29	28
29	14	43	50	59	0	29	58
30	15	14	18	60	0	30	29

REVOLUTIONES LUNÆ AD SOLEM IN ANNORUM CENTURIIS.

Menſes Synodici.	Anni Juliani.	Temp. primæ Conj. poſt Cent. completam.				Anomalia Media Solis.				Solis ab Apog. Lunæ Diſtantia.				Solis à Nodo Lunæ Diſtantia.			
		D.	H.	M.	S	S	°	′	″	S	°	′	″	S	°	′	″
1237	100	4	8	10	52	0	3	21	7	8	15	21	59	4	19	27	17
2474	200	8	16	21	45	0	6	42	15	5	0	43	58	9	8	54	35
3711	300	13	0	32	37	0	10	3	22	1	16	5	57	1	28	21	52
4948	400	17	8	43	29	0	13	24	30	10	1	27	56	6	17	49	10
6185	500	21	16	54	22	0	16	45	37	6	16	49	54	11	7	16	27
7422	600	26	1	5	14	0	20	6	45	3	2	11	53	3	26	43	45
8658	700	0	20	32	3	11	24	21	33	10	21	44	52	7	15	30	48
9895	800	5	4	42	56	11	27	42	41	7	7	6	51	0	4	58	6
11132	900	9	12	53	48	0	1	3	48	3	22	28	50	4	24	25	23
12369	1000	13	21	4	40	0	4	24	56	0	7	50	49	9	13	52	40
13606	1100	18	5	15	33	0	7	46	3	8	23	12	48	2	3	19	58
14843	1200	22	13	26	25	0	11	7	11	5	8	34	47	6	22	47	15
16080	1300	26	21	37	17	0	14	28	18	1	23	56	46	11	12	14	33
17316	1400	1	17	4	6	11	18	43	6	9	13	29	44	3	1	1	36
18553	1500	6	1	14	59	11	22	4	14	5	28	51	43	7	20	28	54
19790	1600	10	9	25	51	11	25	25	21	2	14	13	42	0	9	56	11
21027	1700	14	17	36	44	11	28	46	29	10	29	35	41	4	29	23	28
22264	1800	19	1	47	36	0	2	7	36	7	14	57	40	9	18	50	46
23501	1900	23	9	58	28	0	5	28	44	4	0	19	39	2	8	18	3
24738	2000	27	18	9	21	0	8	49	51	0	15	41	38	6	27	45	21
25974	2100	2	13	36	10	11	13	4	39	8	5	14	35	10	16	32	24
27211	2200	6	21	47	2	11	16	25	46	4	20	36	34	3	5	59	41
28448	2300	11	5	57	54	11	19	46	54	1	5	58	33	7	25	26	59
29685	2400	15	14	8	47	11	23	8	1	9	21	20	32	0	14	54	16
30922	2500	19	22	19	39	11	26	29	9	6	6	42	31	5	4	21	34
32159	2600	24	6	30	31	11	29	50	16	2	22	4	29	9	23	48	51
33396	2700	28	14	41	24	0	3	11	24	11	7	26	28	2	13	16	9
34632	2800	3	10	8	13	11	7	26	12	6	26	59	27	6	2	3	12
35869	2900	7	18	19	5	11	10	47	19	3	12	21	26	10	21	30	29
37106	3000	12	2	29	57	11	14	8	27	11	27	43	25	3	10	57	47
38343	3100	16	10	40	50	11	17	29	34	8	13	5	24	8	0	25	4
39580	3200	20	18	51	42	11	20	50	42	4	28	27	23	0	19	52	22
40817	3300	25	3	2	35	11	24	11	50	1	13	49	23	5	9	19	39

PERIODI LUNARES.

Menſes Synodici.	*Periodi in Annis Jul. diebus & diei partibus.*					*Anomalia Media Solis.*				*Solis ab Apog. Lunæ Diſtantia.*				*Solis à Nodo Lunæ Diſtantia.*			
	Ann.	D.	H.	M.	S.	S	°	′	″	S	°	′	″	S	°	′	″
111	8	355	21	29	38	11	20	41	49	11	15	39	48	5	14	25	47
223	18	11	7	43	20	0	10	29	57	11	27	8	37	11	29	31	48
235	19	0	16	31	56	11	29	45	49	10	6	56	42	0	7	34	35
251	20	107	4	16	45	3	15	26	59	0	0	0	49	4	18	18	18
270	21	303	6	13	43	9	28	17	7	4	10	31	58	0	1	2	42
364	29	157	3	14	30	5	4	21	27	1	7	18	39	0	4	4	32
446	36	21	15	26	40	0	20	59	54	11	24	17	14	11	29	3	35
534	43	64	8	3	8	2	2	16	18	3	15	9	53	5	28	4	2
587	47	168	10	57	50	5	14	51	24	1	4	27	15	0	3	36	19
669	54	32	23	10	0	1	1	29	51	11	21	25	51	11	28	35	23
767	62	4	23	6	59	0	3	49	29	0	1	28	34	4	4	18	8
810	65	178	18	41	10	5	25	21	21	1	1	35	53	0	3	8	7
892	72	43	6	53	20	1	11	59	48	11	18	34	28	11	28	7	10
980	79	85	23	29	49	2	23	16	12	3	10	27	8	5	27	7	36
1115	90	54	14	36	40	1	22	29	45	11	15	43	5	11	27	38	58
1203	97	96	7	13	9	3	3	46	10	3	7	35	43	5	26	39	24
1338	108	65	22	20	0	2	2	59	42	11	12	51	42	11	27	10	45
2148	173	243	17	1	10	7	28	21	4	0	14	27	36	0	0	18	52
2301	186	13	21	20	57	0	11	28	26	0	4	25	43	0	12	54	25
2371	191	255	0	44	31	8	8	51	1	0	11	36	13	11	29	50	39
2641	213	192	6	58	14	6	7	18	8	4	22	8	10	0	0	53	22
2817	227	276	16	11	11	8	29	50	55	0	5	53	28	11	28	54	14
3040	245	286	23	54	31	9	10	20	52	0	3	2	5	11	28	26	2
3621	292	277	6	28	3	9	0	34	20	8	2	35	17	5	28	0	58
3709	299	319	23	4	31	10	11	50	44	11	24	27	56	11	27	1	24
4267	344	361	0	44	53	11	22	38	46	0	0	13	59	6	11	11	0
4601	371	363	5	57	51	11	23	50	32	11	13	2	24	11	25	8	34
5059	409	8	6	13	8	0	4	6	19	9	17	7	44	0	2	14	56
5458	441	102	23	9	25	3	7	9	3	4	28	1	38	11	29	47	37
6444	521	0	3	3	31	11	25	3	12	1	13	22	46	0	0	56	36
6890	557	21	18	30	12	0	16	3	6	1	7	40	2	0	0	0	11
15928	1287	287	6	1	34	9	0	27	16	2	29	47	40	0	0	19	14
22325	1804	359	10	34	42	11	7	33	17	11	29	47	6	11	29	44	56

EPOCHÆ MEDIORVM MOTVVM LVNÆ
Et Apogei ejus. Exiſtente Terrâ in Aphelio.

Annis Chriſti current.	*Luna ab Æquinoctio.*				*Apog. Lunæ ab Æquinoctio.*				*Annis Chriſti current.*	*Luna ab Æquinoctio.*				*Apog. Lunæ ab Æquinoctio.*			
	s.	o.	'	''	s.	o.	'	''		s.	o.	'	''	s.	o.	'	''
1661	3	24	52	14	5	19	29	0	1696	2	22	56	56	5	3	44	7
62	8	7	40	22	7	0	10	34	97	7	5	45	4	6	14	25	42
63	0	20	28	30	8	10	52	9	98	11	18	33	12	7	25	7	16
64	5	3	16	38	9	21	33	43	99	4	1	21	20	9	5	48	51
1665	9	16	4	46	11	2	15	18	1700	8	14	9	28	10	16	30	25
1666	1	28	52	54	0	12	56	52	1701	0	26	57	36	11	27	12	0
67	6	11	41	2	1	23	38	27	2	5	9	45	44	1	7	53	34
68	10	24	29	10	3	4	20	1	3	9	22	33	52	2	18	35	9
69	3	7	17	18	4	15	1	36	4	2	5	22	0	3	29	16	43
1670	7	20	5	26	5	25	43	10	1705	6	18	10	8	5	9	58	18
1671	0	2	53	34	7	6	24	45	1706	11	0	58	16	6	20	39	52
72	4	15	41	43	8	17	6	19	7	3	13	46	24	8	1	21	27
73	8	28	29	51	9	27	47	54	8	7	26	34	32	9	12	3	1
74	1	11	17	59	11	8	29	28	9	0	9	22	40	10	22	44	36
1675	5	24	6	7	0	19	11	3	1710	4	22	10	48	0	3	26	10
1676	10	6	54	15	1	29	52	37	1711	9	4	58	56	1	14	7	45
77	2	19	42	23	3	10	34	12	12	1	17	47	5	2	24	49	19
78	7	2	30	31	4	21	15	46	13	6	0	35	13	4	5	30	54
79	11	15	18	39	6	1	57	21	14	10	13	23	21	5	16	12	28
1680	3	28	6	47	7	12	38	55	1715	2	26	11	29	6	26	54	3
1681	8	10	54	55	8	23	20	30	1716	7	8	59	37	8	7	35	37
82	0	23	43	3	10	4	2	4	17	11	21	47	45	9	18	17	12
83	5	6	31	11	11	14	43	39	18	4	4	35	53	10	28	58	46
84	9	19	19	19	0	25	25	13	19	8	17	24	1	0	9	40	21
1685	2	2	7	27	2	6	6	48	1720	1	0	12	9	1	20	21	55
1686	6	14	55	35	3	16	48	22	1721	5	13	0	17	3	1	3	30
87	10	27	43	43	4	27	29	57	22	9	25	48	25	4	11	45	4
88	3	10	31	51	6	8	11	31	23	2	8	36	33	5	22	26	39
89	7	23	19	59	7	18	53	6	24	6	21	24	41	7	3	8	13
1690	0	6	8	7	8	29	34	40	1725	11	4	12	49	8	13	49	48
1691	4	18	56	15	10	10	16	15	1726	3	17	0	57	9	24	31	22
92	9	1	44	24	11	20	57	49	27	7	29	49	5	11	5	12	57
93	1	14	32	32	1	1	39	24	28	0	12	37	13	0	15	54	31
94	5	27	20	40	2	12	20	58	29	4	25	25	21	1	26	36	6
1695	10	10	8	48	3	23	2	33	1730	9	8	13	29	3	7	17	40

EPOCHÆ MEDIORVM MOTVVM LVNÆ

Et Apogei ejus. Exiſtente Terrâ in Aphelio.

Annis Chriſti current.	Luna ab Æquinoctio.				Apog. Lunæ ab Æquinoctio.				Annis Chriſti current.	Luna ab Æquinoctio.				Apog. Lunæ ab Æquinoctio.			
	s.	°.	'	''	s.	°.	'	''		s.	°.	'	''	s.	°.	'	''
1731	1	21	1	37	4	17	59	15	1766	0	19	6	19	4	2	14	22
32	6	3	49	46	5	28	40	49	67	5	1	54	27	5	12	55	57
33	10	16	37	54	7	9	22	24	68	9	14	42	35	6	23	37	31
34	2	29	26	2	8	20	3	58	69	1	27	30	43	8	4	19	6
1735	7	12	14	10	10	0	45	33	1770	6	10	18	51	9	15	0	40
1736	11	25	2	18	11	11	27	7	1771	10	23	6	59	10	25	42	15
37	4	7	50	26	0	22	8	42	72	3	5	55	8	0	6	23	49
38	8	20	38	34	2	2	50	16	73	7	18	43	16	1	17	5	24
39	1	3	26	42	3	13	31	51	74	0	1	31	24	2	27	46	58
1740	5	16	14	50	4	24	13	25	1775	4	14	19	32	4	8	28	33
1741	9	29	2	58	6	4	55	0	1776	8	27	7	40	5	19	10	7
42	2	11	51	6	7	15	36	34	77	1	9	55	48	6	29	51	42
43	6	24	39	14	8	26	18	9	78	5	22	43	56	8	10	33	16
44	11	7	27	22	10	6	59	43	79	10	5	32	4	9	21	14	51
1745	3	20	15	30	11	17	41	18	1780	2	18	20	12	11	1	56	25
1746	8	3	3	38	0	28	22	52	1781	7	1	8	20	0	12	38	0
47	0	15	51	46	2	9	4	27	82	11	13	56	28	1	23	19	34
48	4	28	39	54	3	19	46	1	83	3	26	44	36	3	4	1	9
49	9	11	28	2	5	0	27	36	84	8	9	32	44	4	14	42	43
1750	1	24	16	10	6	11	9	10	1785	0	22	20	52	5	25	24	18
1751	6	7	4	18	7	21	50	45	1786	5	5	9	0	7	6	5	52
52	10	19	52	27	9	2	32	19	87	9	17	57	8	8	16	47	27
53	3	2	40	35	10	13	13	54	88	2	0	45	16	9	27	29	1
54	7	15	28	43	11	23	55	28	89	6	13	33	24	11	8	10	36
1755	11	28	16	51	1	4	37	3	1790	10	26	21	32	0	18	52	10
1756	4	11	4	59	2	15	18	37	1791	3	9	9	40	1	29	33	45
57	8	23	53	7	3	26	0	12	92	7	21	57	49	3	10	15	19
58	1	6	41	15	5	6	41	46	93	0	4	45	57	4	20	56	54
59	5	19	29	23	6	17	23	21	94	4	17	34	5	6	1	38	28
1760	10	2	17	31	7	28	4	55	1795	9	0	22	13	7	12	20	3
1761	2	15	5	39	9	8	46	30	1796	1	13	10	21	8	23	1	37
62	6	27	53	47	10	19	28	4	97	5	25	58	29	10	3	43	12
63	11	10	41	55	0	0	9	39	98	10	8	46	37	11	14	24	46
64	3	23	30	3	1	10	51	13	99	2	21	34	45	0	25	6	21
1765	8	6	18	11	2	21	32	48	1800	7	4	22	53	2	5	47	55

EPOCHÆ MOTUS NODI ASCENDENTIS LUNÆ
Exiſtente Terrâ in Aphelio.

Annis Chri-ſti cur-rent.	*Nodus* ☽ *Aſcend.* *ab Æquinoct.*				*Annis* Chri-ſti cur-rent.	*Nodus* ☽ *Aſcend.* *ab Æquinoct.*				*Annis* Chri-ſti cur-rent.	*Nodus* ☽ *Aſcend.* *ab Æquinoct.*				*Annis* Chri-ſti cur-rent.	*Nodus* ☽ *Aſcend.* *ab Æquinoct.*			
	s.	°.	'	''		s.	°.	'	''		s.	°.	'	''		s.	°.	'	''
1661	6	12	6	50	1696	7	25	7	52	1731	9	8	8	55	1766	10	21	9	57
62	5	22	46	17	97	7	5	47	20	32	8	18	48	22	67	10	1	49	25
63	5	3	25	45	98	6	16	26	47	33	7	29	27	50	68	9	12	28	52
64	4	14	5	12	99	5	27	6	15	34	7	10	7	17	69	8	23	8	20
1665	3	24	44	40	1700	5	7	45	42	1735	6	20	46	45	1770	8	3	47	47
1666	3	5	24	7	1701	4	18	25	10	1736	6	1	26	12	1771	7	14	27	15
67	2	16	3	35	2	3	29	4	37	37	5	12	5	40	72	6	25	6	42
68	1	26	43	2	3	3	9	44	5	38	4	22	45	7	73	6	5	46	10
69	1	7	22	30	4	2	20	23	32	39	4	3	24	35	74	5	16	25	37
1670	0	18	1	57	1705	2	1	3	0	1740	3	14	4	2	1775	4	27	5	5
1671	11	28	41	25	1706	1	11	42	27	1741	2	24	43	30	1776	4	7	44	32
72	11	9	20	52	7	0	22	21	55	42	2	5	22	57	77	3	18	24	0
73	10	20	0	20	8	0	3	1	22	43	1	16	2	25	78	2	29	3	27
74	10	0	39	47	9	11	13	40	50	44	0	26	41	52	79	2	9	42	55
1675	9	11	19	15	1710	10	24	20	17	1745	0	7	21	20	1780	1	20	22	22
1676	8	21	58	42	1711	10	4	59	45	1746	11	18	0	47	1781	1	1	1	50
77	8	2	38	10	12	9	15	39	12	47	10	28	40	15	82	0	11	41	17
78	7	13	17	37	13	8	26	18	40	48	10	9	19	42	83	11	22	20	45
79	6	23	57	5	14	8	6	58	7	49	9	19	59	10	84	11	3	0	12
1680	6	4	36	32	1715	7	17	37	35	1750	9	0	38	37	1785	10	13	39	40
1681	5	15	16	0	1716	6	28	17	2	1751	8	11	18	5	1786	9	24	19	7
82	4	25	55	27	17	6	8	56	30	52	7	21	57	32	87	9	4	58	35
83	4	6	34	55	18	5	19	35	57	53	7	2	37	0	88	8	15	38	2
84	3	17	14	22	19	5	0	15	25	54	6	13	16	27	89	7	26	17	30
1685	2	27	53	50	1720	4	10	54	52	1755	5	23	55	55	1790	7	6	56	57
1686	2	8	33	17	1721	3	21	34	20	1756	5	4	35	22	1791	6	17	36	25
87	1	19	12	45	22	3	2	13	47	57	4	15	14	50	92	5	28	15	52
88	0	29	52	12	23	2	12	53	15	58	3	25	54	17	93	5	8	55	20
89	0	10	31	40	24	1	23	32	42	59	3	6	33	45	94	4	19	34	47
1690	11	21	11	7	1725	1	4	12	10	1760	2	17	13	12	1795	4	0	14	15
1691	11	1	50	35	1726	0	14	51	37	1761	1	27	52	40	1796	3	10	53	42
92	10	12	30	2	27	11	25	31	5	62	1	8	32	7	97	2	21	33	10
93	9	23	9	30	28	11	6	10	32	63	0	19	11	35	98	2	2	12	37
94	9	3	48	57	29	10	16	50	0	64	11	29	51	2	99	1	12	52	5
1695	8	14	28	25	1730	9	27	29	27	1765	11	10	30	30	1800	0	23	31	32

MEDII MOTVS LVNÆ, APOGEI ET NODORVM AD GRADVS ANOMALIÆ MEDIÆ SOLIS.

Anomalia Media Solis.

	Sig. 0.										Sig. I.									
Gr.	*Motus Medius Lunæ.*				*Mot. Apog. Lunæ.*			*Mot. Nod. Retrog.*			*Motus Medius Lunæ.*				*Mot. Apog. Lunæ.*			*Mot. Nod. Retrog.*		
°	s.	°.	′	″	°.	′	″	°.	′	″	s.	°.	′	″	°.	′	″	°.	′	″
1	0	13	22	20	0	6	27	0	3	4	1	24	32	7	3	20	8	1	35	8
2	0	26	44	40	0	12	53	0	6	8	2	7	54	26	3	26	38	1	38	13
3	1	10	7	0	0	19	20	0	9	11	2	21	16	44	3	33	7	1	41	18
4	1	23	29	20	0	25	46	0	12	15	3	4	39	2	3	39	37	1	44	23
5	2	6	51	40	0	32	12	0	15	19	3	18	1	20	3	46	6	1	47	29
6	2	20	14	0	0	38	38	0	18	22	4	1	23	38	3	52	36	1	50	34
7	3	3	36	20	0	45	5	0	21	26	4	14	45	56	3	59	7	1	53	40
8	3	16	58	40	0	51	32	0	24	29	4	28	8	14	4	5	37	1	56	45
9	4	0	21	0	0	57	58	0	27	33	5	11	30	32	4	12	8	1	59	50
10	4	13	43	19	1	4	25	0	30	37	5	24	52	49	4	18	38	2	2	56
11	4	27	5	39	1	10	52	0	33	41	6	8	15	6	4	25	9	2	6	2
12	5	10	27	59	1	17	19	0	36	45	6	21	37	23	4	31	41	2	9	9
13	5	23	50	19	1	23	46	0	39	49	7	4	59	40	4	38	12	2	12	15
14	6	7	12	38	1	30	13	0	42	53	7	18	21	57	4	44	44	2	15	21
15	6	20	34	58	1	36	40	0	45	57	8	1	44	14	4	51	16	2	18	27
16	7	3	57	18	1	43	7	0	49	1	8	15	6	31	4	57	49	2	21	33
17	7	17	19	38	1	49	34	0	52	5	8	28	28	48	5	4	21	2	24	40
18	8	0	41	58	1	56	2	0	55	9	9	11	51	4	5	10	53	2	27	47
19	8	14	4	18	2	2	29	0	58	13	9	25	13	20	5	17	26	2	30	54
20	8	27	26	37	2	8	56	1	1	17	10	8	35	36	5	24	0	2	34	0
21	9	10	48	57	2	15	23	1	4	22	10	21	57	52	5	30	33	2	37	7
22	9	24	11	16	2	21	51	1	7	26	11	5	20	8	5	37	7	2	40	15
23	10	7	33	35	2	28	19	1	10	31	11	18	42	24	5	43	41	2	43	22
24	10	20	55	54	2	34	47	1	13	35	0	2	4	40	5	50	16	2	46	30
25	11	4	18	13	2	41	15	1	16	39	0	15	26	55	5	56	50	2	49	37
26	11	17	40	32	2	47	44	1	19	44	0	28	49	10	6	3	25	2	52	45
27	0	1	2	52	2	54	13	1	22	48	1	12	11	24	6	10	0	2	55	53
28	0	14	25	11	3	0	41	1	25	53	1	25	33	39	6	16	36	2	59	0
29	0	27	47	30	3	7	10	1	28	58	2	8	55	54	6	23	12	3	2	8
30	1	11	9	48	3	13	39	1	32	3	2	22	18	8	6	29	48	3	5	16

MEDII MOTUS LUNÆ, APOGEI ET NODORUM AD GRADUS ANOMALIÆ MEDIÆ SOLIS.

Anomalia Media Solis.

	Sig. II.										Sig. III.									
Gr.	*Motus Medius Lunæ.*				*Mot. Apog. Lunæ.*			*Mot. Nod. Retrog.*			*Motus Medius Lunæ.*				*Mot. Apog. Lunæ.*			*Mot. Nod. Retrog.*		
°	s.	°.	′	″	°.	′	″	°.	′	″	s.	°.	′	″	°.	′	″	°.	′	″
1	3	5	40	23	6	36	24	3	8	25	4	16	45	59	9	57	10	4	43	51
2	3	19	2	37	6	43	0	3	11	33	5	0	8	7	10	3	57	4	47	5
3	4	2	24	51	6	49	37	3	14	42	5	13	30	14	10	10	45	4	50	18
4	4	15	47	4	6	56	15	3	17	51	5	26	52	22	10	17	33	4	53	32
5	4	29	9	18	7	2	52	3	21	0	6	10	14	29	10	24	21	4	56	46
6	5	12	31	31	7	9	30	3	24	10	6	23	36	37	10	31	9	5	0	0
7	5	25	53	44	7	16	8	3	27	19	7	6	58	43	10	37	58	5	3	15
8	6	9	15	57	7	22	47	3	30	29	7	20	20	50	10	44	48	5	6	29
9	6	22	38	9	7	29	26	3	33	38	8	3	42	56	10	51	37	5	9	44
10	7	6	0	22	7	36	6	3	36	48	8	17	5	3	10	58	27	5	12	59
11	7	19	22	34	7	42	46	3	39	58	9	0	27	9	11	5	18	5	16	14
12	8	2	44	46	7	49	26	3	43	8	9	13	49	14	11	12	9	5	19	29
13	8	16	6	59	7	56	6	3	46	18	9	27	11	20	11	19	0	5	22	44
14	8	29	29	12	8	2	47	3	49	28	10	10	33	25	11	25	51	5	26	0
15	9	12	51	24	8	9	28	3	52	39	10	23	55	31	11	32	42	5	29	15
16	9	26	13	35	8	16	9	3	55	50	11	7	17	35	11	39	34	5	32	31
17	10	9	35	46	8	22	50	3	59	1	11	20	39	40	11	46	27	5	35	47
18	10	22	57	56	8	29	32	4	2	12	0	4	1	45	11	53	20	5	39	4
19	11	6	20	6	8	36	14	4	5	23	0	17	23	49	12	0	13	5	42	20
20	11	19	42	17	8	42	57	4	8	35	1	0	45	53	12	7	7	5	45	37
21	0	3	4	28	8	49	40	4	11	47	1	14	7	56	12	14	1	5	48	54
22	0	16	26	38	8	56	24	4	14	59	1	27	30	0	12	20	55	5	52	11
23	0	29	48	48	9	3	7	4	18	10	2	10	52	4	12	27	50	5	55	28
24	1	13	10	57	9	9	51	4	21	22	2	24	14	7	12	34	45	5	58	45
25	1	26	33	7	9	16	36	4	24	35	3	7	36	10	12	41	40	6	2	3
26	2	9	55	16	9	23	21	4	27	47	3	20	58	14	12	48	36	6	5	20
27	2	23	17	24	9	30	6	4	31	0	4	4	20	17	12	55	32	6	8	38
28	3	6	39	33	9	36	52	4	34	12	4	17	42	19	13	2	28	6	11	56
29	3	20	1	42	9	43	38	4	37	25	5	1	4	21	13	9	24	6	15	14
30	4	3	23	51	9	50	24	4	40	38	5	14	26	24	13	16	21	6	18	32

MEDII MOTUS LUNÆ, APOGEI ET NODORUM AD GRADUS ANOMALIÆ MEDIÆ SOLIS.

Anomalia Media Solis.

Gr.	Sig. IV.										Sig. V.									
	Motus Medius Lunæ.				*Mot. Apog. Lunæ.*			*Mot. Nod. Retrog.*			*Motus Medius Lunæ.*				*Mot. Apog. Lunæ.*			*Mot. Nod. Retrog.*		
°	s.	°.	′	″	°.	′	″	°.	′	″	s.	°.	′	″	°.	′	″	°.	′	″
1	5	27	48	26	13	23	18	6	21	50	7	8	48	0	16	54	14	8	2	6
2	6	11	10	27	13	30	16	6	25	9	7	22	9	57	17	1	20	8	5	28
3	6	24	32	28	13	37	14	6	28	27	8	5	31	54	17	8	25	8	8	51
4	7	7	54	29	13	44	13	6	31	46	8	18	53	51	17	15	31	8	12	13
5	7	21	16	30	13	51	12	6	35	5	9	2	15	48	17	22	37	8	15	35
6	8	4	38	31	13	58	10	6	38	24	9	15	37	45	17	29	44	8	18	58
7	8	18	0	32	14	5	9	6	41	43	9	28	59	41	17	36	50	8	22	20
8	9	1	22	33	14	12	8	6	45	3	10	12	21	37	17	43	57	8	25	43
9	9	14	44	34	14	19	9	6	48	23	10	25	43	33	17	51	4	8	29	5
10	9	28	6	34	14	26	9	6	51	42	11	9	5	29	17	58	11	8	32	28
11	10	11	28	33	14	33	10	6	55	2	11	22	27	25	18	5	17	8	35	52
12	10	24	50	33	14	40	11	6	58	23	0	5	49	21	18	12	24	8	39	15
13	11	8	12	33	14	47	11	7	1	42	0	19	11	17	18	19	31	8	42	38
14	11	21	34	32	14	54	12	7	5	3	1	2	33	14	18	26	38	8	46	1
15	0	4	56	31	15	1	14	7	8	23	1	15	55	10	18	33	46	8	49	25
16	0	18	18	31	15	8	16	7	11	43	1	29	17	6	18	40	54	8	52	48
17	1	1	40	30	15	15	18	7	15	4	2	12	39	2	18	48	2	8	56	12
18	1	15	2	29	15	22	21	7	18	25	2	26	0	58	18	55	10	8	59	35
19	1	28	24	27	15	29	23	7	21	46	3	9	22	54	19	2	17	9	2	58
20	2	11	46	26	15	36	26	7	25	7	3	22	44	50	19	9	25	9	6	22
21	2	25	8	25	15	43	29	7	28	29	4	6	6	46	19	16	33	9	9	45
22	3	8	30	23	15	50	33	7	31	50	4	19	28	41	19	23	41	9	13	9
23	3	21	52	21	15	57	36	7	35	10	5	2	50	36	19	30	49	9	16	32
24	4	5	14	18	16	4	40	7	38	32	5	16	12	31	19	37	57	9	19	56
25	4	18	36	16	16	11	44	7	41	53	5	29	34	26	19	45	6	9	23	19
26	5	1	58	14	16	18	49	7	45	15	6	12	56	21	19	52	14	9	26	42
27	5	15	20	12	16	25	53	7	48	37	6	26	18	17	19	59	22	9	30	6
28	5	28	42	9	16	32	58	7	51	59	7	9	40	13	20	6	30	9	33	29
29	6	12	4	6	16	40	3	7	55	21	7	23	2	8	20	13	38	9	36	53
30	6	25	26	3	16	47	8	7	58	43	8	6	24	4	20	20	47	9	40	16

MEDII MOTUS LUNÆ, APOGEI ET NODORUM AD GRADUS ANOMALIÆ MEDIÆ SOLIS.

Anomalia Media Solis.

Gr.	Sig. VI.										Sig. VII.									
	Motus Medius Lunæ.				*Mot. Apog. Lunæ.*			*Mot. Nod. Retrog.*			*Motus Medius Lunæ.*				*Mot. Apog. Lunæ.*			*Mot. Nod. Retrog.*		
o	s.	o.	'	''	o.	'	''	o.	'	''	s.	o.	'	''	o.	'	''	o.	'	''
1	8	19	46	0	20	27	55	9	43	40	10	0	44	2	24	1	31	11	25	12
2	9	3	7	55	20	35	4	9	47	3	10	14	5	59	24	8	36	11	28	34
3	9	16	29	51	20	42	12	9	50	26	10	27	27	56	24	15	41	11	31	55
4	9	29	51	47	20	49	20	9	53	50	11	10	49	54	24	22	46	11	35	16
5	10	13	13	42	20	56	28	9	57	13	11	24	11	52	24	29	51	11	38	39
6	10	26	35	37	21	3	37	10	0	37	0	7	33	50	24	36	55	11	42	0
7	11	9	57	32	21	10	46	10	4	0	0	20	55	47	24	43	58	11	45	22
8	11	23	19	28	21	17	54	10	7	24	1	4	17	45	24	51	1	11	48	42
9	0	6	41	24	21	25	1	10	10	47	1	17	39	43	24	58	5	11	52	4
10	0	20	3	19	21	32	9	10	14	10	2	1	1	42	25	5	8	11	55	25
11	1	3	25	14	21	39	17	10	17	34	2	14	23	41	25	12	11	11	58	46
12	1	16	47	10	21	46	24	10	20	57	2	27	45	40	25	19	13	12	2	7
13	2	0	9	6	21	53	32	10	24	21	3	11	7	39	25	26	16	12	5	28
14	2	13	31	2	22	0	40	10	27	44	3	24	29	38	25	33	18	12	8	49
15	2	26	52	57	22	7	48	10	31	7	4	7	51	37	25	40	20	12	12	9
16	3	10	14	53	22	14	56	10	34	31	4	21	13	36	25	47	22	12	15	30
17	3	23	36	49	22	22	3	10	37	54	5	4	35	35	25	54	23	12	18	50
18	4	6	58	45	22	29	10	10	41	17	5	17	57	35	26	1	24	12	22	9
19	4	20	20	42	22	36	17	10	44	40	6	1	19	35	26	8	25	12	25	30
20	5	3	42	38	22	43	24	10	48	4	6	14	41	34	26	15	26	12	28	50
21	5	17	4	34	22	50	31	10	51	27	6	28	3	34	26	22	26	12	32	10
22	6	0	26	30	22	57	38	10	54	49	7	11	25	35	26	29	25	12	35	29
23	6	13	48	26	23	4	44	10	58	12	7	24	47	36	26	36	25	12	38	49
24	6	27	10	23	23	11	50	11	1	34	8	8	9	37	26	43	24	12	42	9
25	7	10	32	19	23	18	57	11	4	57	8	21	31	38	26	50	24	12	45	28
26	7	23	54	16	23	26	3	11	8	19	9	4	53	39	26	57	21	12	48	46
27	8	7	16	13	23	33	9	11	11	41	9	18	15	40	27	4	20	12	52	5
28	8	20	38	10	23	40	15	11	15	4	10	1	37	41	27	11	18	12	55	14
29	9	4	0	8	23	47	20	11	18	26	10	14	59	42	27	18	16	12	58	42
30	9	17	22	5	23	54	26	11	21	49	10	28	21	44	27	25	13	13	2	0

MEDII MOTUS LUNÆ, APOGEI ET NODORUM AD GRADUS ANOMALIÆ MEDIÆ SOLIS.

Anomalia Media Solis.

	Sig. VIII.											Sig. IX.										
Gr.	*Motus Medius Lunæ.*				*Mot. Apog. Lunæ.*				*Mot. Nod. Retrog.*			*Motus Medius Lunæ.*				*Mot. Apog. Lunæ.*				*Mot. Nod. Retrog.*		
o	s.	o.	′	″	s.	o.	′	″	o.	′	″	s.	o.	′	″	s.	o.	′	″	o.	′	″
1	11	11	43	47	0	27	32	10	13	5	18	0	22	46	26	1	0	57	57	14	43	7
2	11	25	5	49	0	27	39	7	13	8	36	1	6	8	34	1	1	4	43	14	46	20
3	0	8	27	51	0	27	46	3	13	11	54	1	19	30	43	1	1	11	28	14	49	33
4	0	21	49	54	0	27	52	59	13	15	12	2	2	52	52	1	1	18	13	14	52	45
5	1	5	11	57	0	27	59	54	13	18	30	2	16	15	1	1	1	24	58	14	55	57
6	1	18	34	0	0	28	6	49	13	21	47	2	29	37	11	1	1	31	43	14	59	10
7	2	1	56	3	0	28	13	44	13	25	4	3	12	59	20	1	1	38	27	15	2	22
8	2	15	18	7	0	28	20	39	13	28	21	3	26	21	30	1	1	45	10	15	5	34
9	2	28	40	11	0	28	27	33	13	31	38	4	9	43	40	1	1	51	54	15	8	46
10	3	12	2	15	0	28	34	27	13	34	55	4	23	5	51	1	1	58	37	15	11	58
11	3	25	24	19	0	28	41	21	13	38	12	5	6	28	1	1	2	5	20	15	15	9
12	4	8	46	23	0	28	48	14	13	41	29	5	19	50	11	1	2	12	2	15	18	20
13	4	22	8	28	0	28	55	7	13	44	45	6	3	12	22	1	2	18	44	15	21	31
14	5	5	30	33	0	29	2	0	13	48	1	6	16	34	33	1	2	25	26	15	24	42
15	5	18	52	38	0	29	8	52	13	51	17	6	29	56	44	1	2	32	7	15	27	53
16	6	2	14	43	0	29	15	44	13	54	32	7	13	18	56	1	2	38	48	15	31	4
17	6	15	36	48	0	29	22	35	13	57	48	7	26	41	8	1	2	45	28	15	34	14
18	6	28	58	54	0	29	29	26	14	1	3	8	10	3	21	1	2	52	8	15	37	24
19	7	12	20	59	0	29	36	16	14	4	19	8	23	25	33	1	2	58	48	15	40	34
20	7	25	43	5	0	29	43	7	14	7	34	9	6	47	45	1	3	5	28	15	43	44
21	8	9	5	12	0	29	49	57	14	10	49	9	20	9	58	1	3	12	8	15	46	54
22	8	22	27	18	0	29	56	46	14	14	3	10	3	32	10	1	3	18	47	15	50	4
23	9	5	49	25	1	0	3	36	14	17	17	10	16	54	23	1	3	25	26	15	53	13
24	9	19	11	31	1	0	10	25	14	20	32	11	0	16	30	1	3	32	4	15	56	22
25	10	2	33	38	1	0	17	13	14	23	46	11	13	38	49	1	3	38	42	15	59	32
26	10	15	55	45	1	0	24	1	14	27	0	11	27	1	3	1	3	45	19	16	2	41
27	10	29	17	53	1	0	30	49	14	30	14	0	10	23	16	1	3	51	57	16	5	50
28	11	12	40	1	1	0	37	37	14	33	27	0	23	45	30	1	3	58	34	16	8	59
29	11	26	2	9	1	0	44	24	14	36	41	1	7	7	45	1	4	5	11	16	12	8
30	0	9	24	17	1	0	51	11	14	39	54	1	20	30	0	1	4	11	47	16	15	16

MEDII MOTUS LUNÆ, APOGEI ET NODORUM AD GRADUS ANOMALIÆ MEDIÆ SOLIS.

Anomalia Media Solis.

	Sig. X.			Sig. XI.		
Gr.	*Motus Medius Lunæ.*	*Mot. Apog. Lunæ.*	*Mot. Nod. Retrog.*	*Motus Medius Lunæ.*	*Mot. Apog. Lunæ.*	*Mot. Nod. Retrog.*
°	s. °. ′ ″	s. °. ′ ″	°. ′ ″	s. °. ′ ″	s. °. ′ ″	°. ′ ″
1	2 3 52 14	1 4 18 23	16 18 24	3 15 0 38	1 7 34 25	17 51 34
2	2 17 14 29	1 4 24 58	16 21 32	3 28 22 57	1 7 40 53	17 54 39
3	3 0 36 44	1 4 31 34	16 24 39	4 11 45 16	1 7 47 21	17 57 44
4	3 13 58 58	1 4 38 9	16 27 47	4 25 7 35	1 7 53 50	18 0 48
5	3 27 21 13	1 4 44 44	16 30 55	5 8 29 54	1 8 0 19	18 3 53
6	4 10 43 28	1 4 51 18	16 34 3	5 21 52 13	1 8 6 47	18 6 57
7	4 24 5 44	1 4 57 53	16 37 10	6 5 14 32	1 8 13 15	18 10 2
8	5 7 28 0	1 5 4 27	16 40 17	6 18 36 51	1 8 19 43	18 13 6
9	5 20 50 16	1 5 11 2	16 43 25	7 1 59 10	1 8 26 11	18 16 10
10	6 4 12 32	1 5 17 35	16 46 32	7 15 21 30	1 8 32 39	18 19 15
11	6 17 34 48	1 5 24 8	16 49 39	7 28 43 49	1 8 39 6	18 22 19
12	7 0 57 4	1 5 30 41	16 52 45	8 12 6 9	1 8 45 33	18 25 24
13	7 14 19 20	1 5 37 14	16 55 51	8 25 28 30	1 8 52 1	18 28 28
14	7 27 41 37	1 5 43 46	16 58 59	9 8 50 50	1 8 58 28	18 31 32
15	8 11 3 54	1 5 50 19	17 2 5	9 22 13 10	1 9 4 54	18 34 35
16	8 24 26 11	1 5 56 51	17 5 12	10 5 35 30	1 9 11 21	18 37 39
17	9 7 48 28	1 6 3 22	17 8 17	10 18 57 49	1 9 17 48	18 40 43
18	9 21 10 45	1 6 9 53	17 11 23	11 2 20 9	1 9 24 15	18 43 47
19	10 4 33 2	1 6 16 25	17 14 30	11 15 42 29	1 9 30 42	18 46 51
20	10 17 55 19	1 6 22 56	17 17 35	11 29 4 49	1 9 37 9	18 49 55
21	11 1 17 36	1 6 29 26	17 20 42	0 12 27 8	1 9 43 36	18 52 59
22	11 14 39 54	1 6 35 57	17 23 47	0 25 49 28	1 9 50 2	18 56 3
23	11 28 2 12	1 6 42 27	17 26 53	1 9 11 48	1 9 56 29	18 59 6
24	0 11 24 30	1 6 48 58	17 29 58	1 22 34 8	1 10 2 56	19 2 10
25	0 24 46 48	1 6 55 28	17 33 4	2 5 56 28	1 10 9 22	19 5 13
26	1 8 9 6	1 7 1 58	17 36 9	2 19 18 48	1 10 15 49	19 8 18
27	1 21 31 24	1 7 8 28	17 39 14	3 2 41 8	1 10 22 15	19 11 21
28	2 4 53 42	1 7 14 57	17 42 20	3 16 3 28	1 10 28 42	19 14 25
29	2 18 16 1	1 7 21 27	17 45 25	3 29 25 48	1 10 35 8	19 17 29
30	3 1 38 20	1 7 27 56	17 48 30	4 12 48 8	1 10 41 34	19 20 32

MEDII MOTVS LVNÆ, APOGEI ET NODORVM AD MINVTA ANOMALIÆ MEDIÆ SOLIS.

	Mot. Med. Lunæ.			*Apogei Lunæ.*			*Motus Nod. ☽.*			*Anom. Solis.*	*Mot. Med. Lunæ.*			*Apogei Lunæ.*			*Motus Nod. ☽.*		
Tert. *Sec.* *Min.*	″ ′ °.	‴ ″ ′	⁗ ‴ ″	″ ′ °.	‴ ″ ′	⁗ ‴ ″	″ ′ °.	‴ ″ ′	⁗ ‴ ″	*Tert.* *Sec.* *Min.*	″ ′ °.	‴ ″ ′	⁗ ‴ ″	″ ′ °.	‴ ″ ′	⁗ ‴ ″	″ ′ °.	‴ ″ ′	⁗ ‴ ″
0	0	0	0	0	0	0	0	0	0	30	6	41	4	0	3	23	0	1	37
1	0	13	22	0	0	7	0	0	3	31	6	54	26	0	3	30	0	1	40
2	0	26	44	0	0	14	0	0	6	32	7	7	48	0	3	37	0	1	43
3	0	40	6	0	0	20	0	0	10	33	7	21	10	0	3	44	0	1	46
4	0	53	29	0	0	27	0	0	13	34	7	34	33	0	3	51	0	1	50
5	1	6	51	0	0	34	0	0	16	35	7	47	55	0	3	57	0	1	53
6	1	20	13	0	0	41	0	0	19	36	8	1	17	0	4	4	0	1	56
7	1	33	35	0	0	47	0	0	23	37	8	14	39	0	4	11	0	1	59
8	1	46	57	0	0	54	0	0	26	38	8	28	1	0	4	18	0	2	2
9	2	0	19	0	1	1	0	0	29	39	8	41	23	0	4	24	0	2	6
10	2	13	41	0	1	8	0	0	32	40	8	54	45	0	4	31	0	2	9
11	2	27	3	0	1	15	0	0	35	41	9	8	7	0	4	38	0	2	12
12	2	40	26	0	1	21	0	0	39	42	9	21	30	0	4	45	0	2	15
13	2	53	48	0	1	28	0	0	42	43	9	34	52	0	4	52	0	2	19
14	3	7	10	0	1	35	0	0	45	44	9	48	14	0	4	58	0	2	22
15	3	20	32	0	1	42	0	0	48	45	10	1	36	0	5	5	0	2	25
16	3	33	54	0	1	49	0	0	52	46	10	14	58	0	5	12	0	2	28
17	3	47	16	0	1	55	0	0	55	47	10	28	20	0	5	19	0	2	32
18	4	0	38	0	2	2	0	0	58	48	10	41	42	0	5	26	0	2	35
19	4	14	1	0	2	9	0	1	1	49	10	55	5	0	5	32	0	2	38
20	4	27	23	0	2	16	0	1	4	50	11	8	27	0	5	39	0	2	41
21	4	40	45	0	2	22	0	1	8	51	11	21	49	0	5	46	0	2	44
22	4	54	7	0	2	29	0	1	11	52	11	35	11	0	5	53	0	2	48
23	5	7	29	0	2	36	0	1	14	53	11	48	33	0	5	59	0	2	51
24	5	20	51	0	2	43	0	1	17	54	12	1	55	0	6	6	0	2	54
25	5	34	13	0	2	50	0	1	21	55	12	15	17	0	6	13	0	2	57
26	5	47	35	0	2	56	0	1	24	56	12	28	39	0	6	20	0	3	1
27	6	0	58	0	3	3	0	1	27	57	12	42	2	0	6	27	0	3	4
28	6	14	20	0	3	10	0	1	30	58	12	55	24	0	6	33	0	3	7
29	6	27	42	0	3	17	0	1	33	59	13	8	46	0	6	40	0	3	10
30	6	41	4	0	3	23	0	1	37	60	13	22	8	0	6	47	0	3	13

TABVLA MEDII MOTVS LVNÆ, APOGEI ET NODORVM AB ÆQVINOCTIO, AC LVNÆ A SOLE.

IN CENTVRIIS ANNORVM ANOMALISTICORVM.

Annis Anomaliſticis.	Motus Medius Lunæ.				Motus Apogei Lunæ.				Motus Nodorum Lunæ Retrog.				Motus Lunæ a Sole.			
	s.	o.	'	"	s.	o.	'	"	s.	o.	'	"	s.	o.	'	"
100	10	20	13	25	3	19	17	30	4	14	14	10	10	18	32	18
200	9	10	26	50	7	8	35	0	8	28	28	20	9	7	4	37
300	8	0	40	15	10	27	52	30	1	12	42	30	7	25	36	55
400	6	20	53	40	2	17	10	0	5	26	56	40	6	14	9	13
500	5	11	7	5	6	6	27	30	10	11	10	50	5	2	41	32
600	4	1	20	30	9	25	45	0	2	25	25	0	3	21	13	50
700	2	21	33	55	1	15	2	30	7	9	39	10	2	9	46	8
800	1	11	47	20	5	4	20	0	11	23	53	20	0	28	18	27
900	0	2	0	45	8	23	37	30	4	8	7	30	11	16	50	45
1000	10	22	14	10	0	12	55	0	8	22	21	40	10	5	23	3
1100	9	12	27	35	4	2	12	30	1	6	35	50	8	23	55	22
1200	8	2	41	0	7	21	30	0	5	20	50	0	7	12	27	40
1300	6	22	54	25	11	10	47	30	10	5	4	10	6	0	59	58
1400	5	13	7	50	3	0	5	0	2	19	18	20	4	19	32	17
1500	4	3	21	15	6	19	22	30	7	3	32	30	3	8	4	35
1600	2	23	34	40	10	8	40	0	11	17	46	40	1	26	36	53
1700	1	13	48	5	1	27	57	30	4	2	0	50	0	15	9	12
1800	0	4	1	30	5	17	15	0	8	16	15	0	11	3	41	30
1900	10	24	14	55	9	6	32	30	1	0	29	10	9	22	13	48
2000	9	14	28	20	0	25	50	0	5	14	43	20	8	10	46	7
2100	8	4	41	45	4	15	7	30	9	28	57	30	6	29	18	25
2200	6	24	55	10	8	4	25	0	2	13	11	40	5	17	50	43
2300	5	15	8	35	11	23	42	30	6	27	25	50	4	6	23	2
2400	4	5	22	0	3	13	0	0	11	11	40	0	2	24	55	20
2500	2	25	35	25	7	2	17	30	3	25	54	10	1	13	27	38
2600	1	15	48	50	10	21	35	0	8	10	8	20	0	1	59	57
2700	0	6	2	15	2	10	52	30	0	24	22	30	10	20	32	15
2800	10	26	15	40	6	0	10	0	5	8	36	40	9	9	4	33
2900	9	16	29	5	9	19	27	30	9	22	50	50	7	27	36	52
3000	8	6	42	30	1	8	45	0	2	7	5	0	6	16	9	10
3100	6	26	55	55	4	28	2	30	6	21	19	10	5	4	41	28
3200	5	17	9	20	8	17	20	0	11	5	33	20	3	23	13	47

EPOCHÆ MEDIORVM MOTVVM LVNÆ
Et Apogei ejus. Annis Julianis ineuntibus.

Annis Julianis ineuntibus.	*Luna ab Æquinoctio.*				*Apog. Lunæ ab Æquinoctio.*				*Annis Julianis ineuntibus.*	*Luna ab Æquinoctio.*				*Apog. Lunæ ab Æquinoctio.*			
	s.	°.	′	″	s.	°.	′	″		s.	°.	′	″	s.	°.	′	″
1661	1	18	11	50	5	0	39	30	1696	0	2	3	32	4	14	47	26
62	5	27	34	53	6	11	19	21	97	4	24	37	11	5	25	33	57
63	10	6	57	57	7	21	59	11	98	9	4	0	14	7	6	13	48
64	2	16	21	0	9	2	39	2	99	1	13	23	18	8	16	53	38
1665	7	8	54	39	10	13	25	33	1700	5	22	46	21	9	27	33	29
1666	11	18	17	42	11	24	5	24	1701	10	15	20	0	11	8	20	0
67	3	27	40	46	1	4	45	14	2	2	24	43	3	0	18	59	51
68	8	7	3	49	2	15	25	5	3	7	4	6	7	1	29	39	41
69	0	29	37	28	3	26	11	36	4	11	13	29	10	3	10	19	32
1670	5	9	0	31	5	6	51	27	1705	4	6	2	49	4	21	6	3
1671	9	18	23	35	6	17	31	17	1706	8	15	25	52	6	1	45	54
72	1	27	46	38	7	28	11	8	7	0	24	48	56	7	12	25	44
73	6	20	20	17	9	8	57	39	8	5	4	11	59	8	23	5	35
74	10	29	43	20	10	19	37	30	9	9	26	45	38	10	3	52	6
1675	3	9	6	24	0	0	17	20	1710	2	6	8	41	11	14	31	57
1676	7	18	29	27	1	10	57	11	1711	6	15	31	45	0	25	11	47
77	0	11	3	6	2	21	43	42	12	10	24	54	48	2	5	51	38
78	4	20	26	9	4	2	23	33	13	3	17	28	27	3	16	38	9
79	8	29	49	13	5	13	3	23	14	7	26	51	30	4	27	18	0
1680	1	9	12	16	6	23	43	14	1715	0	6	14	34	6	7	57	50
1681	6	1	45	55	8	4	29	45	1716	4	15	37	37	7	18	37	41
82	10	11	8	58	9	15	9	36	17	9	8	11	16	8	29	24	12
83	2	20	32	2	10	25	49	26	18	1	17	34	19	10	10	4	3
84	6	29	55	5	0	6	29	17	19	5	26	57	23	11	20	43	53
1685	11	22	28	44	1	17	15	48	1720	10	6	20	26	1	1	23	44
1686	4	1	51	47	2	27	55	39	1721	2	28	54	5	2	12	10	15
87	8	11	14	51	4	8	35	29	22	7	8	17	8	3	22	50	6
88	0	20	37	54	5	19	15	20	23	11	17	40	12	5	3	29	56
89	5	13	11	33	7	0	1	51	24	3	27	3	15	6	14	9	47
1690	9	22	34	36	8	10	41	42	1725	8	19	36	54	7	24	56	18
1691	2	1	57	40	9	21	21	32	1726	0	28	59	57	9	5	36	9
92	6	11	20	43	11	2	1	23	27	5	8	23	1	10	16	15	59
93	11	3	54	22	0	12	47	54	28	9	17	46	4	11	26	55	50
94	3	13	17	25	1	23	27	45	29	2	10	19	43	1	7	42	21
1695	7	22	40	29	3	4	7	35	1730	6	19	42	46	2	18	22	12

EPOCHÆ MEDIORVM MOTVVM LVNÆ Et Apogei ejus. Annis Julianis ineuntibus.

Annis Julianis ineuntibus.	Luna ab Æquinoctio.				Apog. Lunæ ab Æquinoctio.				Annis Julianis ineuntibus.	Luna ab Æquinoctio.				Apog. Lunæ ab Æquinoctio.			
	s.	o.	′	″	s.	o.	′	″		s.	o.	′	″	s.	o.	′	″
1731	10	29	5	50	3	29	2	2	1766	9	26	8	7	3	13	16	39
32	3	8	28	53	5	9	41	53	67	2	5	31	11	4	23	56	29
33	8	1	2	32	6	20	28	24	68	6	14	54	14	6	4	36	20
34	0	10	25	35	8	1	8	15	69	11	7	27	53	7	15	22	51
1735	4	19	48	39	9	11	48	5	1770	3	16	50	56	8	26	2	42
1736	8	29	11	42	10	22	27	56	1771	7	26	14	0	10	6	42	32
37	1	21	45	21	0	3	14	27	72	0	5	37	3	11	17	22	23
38	6	1	8	24	1	13	54	18	73	4	28	10	42	0	28	8	54
39	10	10	31	28	2	24	34	8	74	9	7	33	45	2	8	48	45
1740	2	19	54	31	4	5	13	59	1775	1	16	56	49	3	19	28	35
1741	7	12	28	10	5	16	0	30	1776	5	26	19	52	5	0	8	26
42	11	21	51	13	6	26	40	21	77	10	18	53	31	6	10	54	57
43	4	1	14	17	8	7	20	11	78	2	28	16	34	7	21	34	48
44	8	10	37	20	9	18	0	2	79	7	7	39	38	9	2	14	38
1745	1	3	10	59	10	28	46	33	1780	11	17	2	41	10	12	54	29
1746	5	12	34	2	0	9	26	24	1781	4	9	36	20	11	23	41	0
47	9	21	57	6	1	20	6	14	82	8	18	59	23	1	4	20	51
48	2	1	20	9	3	0	46	5	83	0	28	22	27	2	15	0	41
49	6	23	53	48	4	11	32	36	84	5	7	45	30	3	25	40	32
1750	11	3	16	51	5	22	12	27	1785	10	0	19	9	5	6	27	3
1751	3	12	39	55	7	2	52	17	1786	2	9	42	12	6	17	6	54
52	7	22	2	58	8	13	32	8	87	6	19	5	16	7	27	46	44
53	0	14	36	37	9	24	18	39	88	10	28	28	19	9	8	26	35
54	4	23	59	40	11	4	58	30	89	3	21	1	58	10	19	13	6
1755	9	3	22	44	0	15	38	20	1790	8	0	25	1	11	29	52	57
1756	1	12	45	47	1	26	18	11	1791	0	9	48	5	1	10	32	47
57	6	5	19	26	3	7	4	42	92	4	19	11	8	2	21	12	38
58	10	14	42	29	4	17	44	33	93	9	11	44	47	4	1	59	9
59	2	24	5	33	5	28	24	23	94	1	21	7	50	5	12	39	0
1760	7	3	28	36	7	9	4	14	1795	6	0	30	54	6	23	18	50
1761	11	26	2	15	8	19	50	45	1796	10	9	53	57	8	3	58	41
62	4	5	25	18	10	0	30	36	97	3	2	27	36	9	14	45	12
63	8	14	48	22	11	11	10	26	98	7	11	50	39	10	25	25	3
64	0	24	11	25	0	21	50	17	99	11	21	13	43	0	6	4	53
1765	5	16	45	4	2	2	36	48	1800	4	0	36	46	1	16	44	44

EPOCHÆ MOTVS NODI ASCENDENTIS LVNÆ
Annis Julianis ineuntibus.

Annis Julianis ineuntibus.	*Nodus* ☽ *Aſcend. ab Æquinoct.*				*Annis Julianis ineuntibus.*	*Nodus* ☽ *Aſcend. ab Æquinoct.*				*Annis Julianis ineuntibus.*	*Nodus* ☽ *Aſcend. ab Æquinoct.*				*Annis Julianis ineuntibus.*	*Nodus* ☽ *Aſcend. ab Æquinoct.*			
	s.	o.	′	″		s.	o.	′	″		s.	o.	′	″		s.	o.	′	″
1661	6	21	3	50	1696	8	4	8	17	1731	9	17	9	33	1766	11	0	10	49
62	6	1	44	7	97	7	14	45	23	32	8	27	49	50	67	10	10	51	6
63	5	12	24	24	98	6	25	25	40	33	8	8	26	56	68	9	21	31	23
64	4	23	4	41	99	6	6	5	57	34	7	19	7	13	69	9	2	8	29
1665	4	3	41	47	1700	5	16	46	14	1735	6	29	47	30	1770	8	12	48	46
1666	3	14	22	4	1701	4	27	23	20	1736	6	10	27	47	1771	7	23	29	3
67	2	25	2	21	2	4	8	3	37	37	5	21	4	53	72	7	4	9	20
68	2	5	42	38	3	3	18	43	54	38	5	1	45	10	73	6	14	46	26
69	1	16	19	44	4	2	29	24	11	39	4	12	25	27	74	5	25	26	43
1670	0	27	0	1	1705	2	10	1	17	1740	3	23	5	44	1775	5	6	7	0
1671	0	7	40	18	1706	1	20	41	34	1741	3	3	42	50	1776	4	16	47	17
72	11	18	20	35	7	1	1	21	51	42	2	14	23	7	77	3	27	24	23
73	10	28	57	41	8	0	12	2	8	43	1	25	3	24	78	3	8	4	40
74	10	9	37	58	9	11	22	39	14	44	1	5	43	41	79	2	18	44	57
1675	9	20	18	15	1710	11	3	19	31	1745	0	16	20	47	1780	1	29	25	14
1676	9	0	58	32	1711	10	13	59	48	1746	11	27	1	4	1781	1	10	2	20
77	8	11	35	38	12	9	24	40	5	47	11	7	41	21	82	0	20	42	37
78	7	22	15	55	13	9	5	17	11	48	10	18	21	38	83	0	1	22	54
79	7	2	56	12	14	8	15	57	28	49	9	28	58	44	84	11	12	3	11
1680	6	13	36	29	1715	7	26	37	45	1750	9	9	39	1	1785	10	22	40	17
1681	5	24	13	35	1716	7	7	18	2	1751	8	20	19	18	1786	10	3	20	34
82	5	4	53	52	17	6	17	55	8	52	8	0	59	35	87	9	14	0	51
83	4	15	34	9	18	5	28	35	25	53	7	11	36	41	88	8	24	41	8
84	3	26	14	26	19	5	9	15	42	54	6	22	16	58	89	8	5	18	14
1685	3	6	51	32	1720	4	19	55	59	1755	6	2	57	15	1790	7	15	58	31
1686	2	17	31	49	1721	4	0	33	5	1756	5	13	37	32	1791	6	26	38	48
87	1	28	12	6	22	3	11	13	22	57	4	24	14	38	92	6	7	19	5
88	1	8	52	23	23	2	21	53	39	58	4	4	54	55	93	5	17	56	11
89	0	19	29	29	24	2	2	33	56	59	3	15	35	12	94	4	28	36	28
1690	0	0	9	46	1725	1	13	11	2	1760	2	26	15	29	1795	4	9	16	45
1691	11	10	50	3	1726	0	23	51	19	1761	2	6	52	35	1796	3	19	57	2
92	10	21	30	20	27	0	4	31	36	62	1	17	32	52	97	3	0	34	8
93	10	2	7	26	28	11	15	11	53	63	0	28	13	9	98	2	11	14	25
94	9	12	47	43	29	10	25	48	59	64	0	8	53	26	99	1	21	54	42
1695	8	23	28	0	1730	10	6	29	16	1765	11	19	30	32	1800	1	2	34	59

MEDII MOTVS LVNÆ, APOGEI ET NODORVM EJVS AD DIES MENSIVM.

	JANUARII.										FEBRUARII.									
Die Menſis.	Motus Medius Lunæ.				Motus Apogei.			Mot. Nod. Retrog.			Motus Medius Lunæ.				Motus Apogei.			Mot. Nod. Retrog.		
	s.	°.	′	″	°.	′	″	°.	′	″	s.	°.	′	″	°.	′	″	°.	′	″
1	0	13	10	35	0	6	41	0	3	11	2	1	38	41	3	33	54	1	41	41
2	0	26	21	10	0	13	22	0	6	21	2	14	49	16	3	40	35	1	44	52
3	1	9	31	45	0	20	3	0	9	32	2	27	59	51	3	47	16	1	48	2
4	1	22	42	20	0	26	44	0	12	43	3	11	10	26	3	53	57	1	51	13
5	2	5	52	55	0	33	25	0	15	53	3	24	21	1	4	0	37	1	54	24
6	2	19	3	30	0	40	6	0	19	4	4	7	31	36	4	7	18	1	57	34
7	3	2	14	5	0	46	47	0	22	14	4	20	42	11	4	14	0	2	0	45
8	3	15	24	40	0	53	29	0	25	25	5	3	52	46	4	20	41	2	3	55
9	3	28	35	15	1	0	10	0	28	36	5	17	3	21	4	27	22	2	7	6
10	4	11	45	50	1	6	51	0	31	46	6	0	13	56	4	34	3	2	10	17
11	4	24	56	25	1	13	32	0	34	57	6	13	24	31	4	40	44	2	13	27
12	5	8	7	0	1	20	13	0	38	8	6	26	35	6	4	47	25	2	16	38
13	5	21	17	35	1	26	54	0	41	18	7	9	45	41	4	54	6	2	19	49
14	6	4	28	10	1	33	35	0	44	29	7	22	56	16	5	0	47	2	22	59
15	6	17	38	45	1	40	16	0	47	40	8	6	6	51	5	7	28	2	26	10
16	7	0	49	20	1	46	57	0	50	50	8	19	17	26	5	14	9	2	29	21
17	7	13	59	55	1	53	38	0	54	1	9	2	28	1	5	20	50	2	32	31
18	7	27	10	30	2	0	19	0	57	12	9	15	38	36	5	27	31	2	35	42
19	8	10	21	5	2	7	0	1	0	22	9	28	49	11	5	34	12	2	38	53
20	8	23	31	40	2	13	41	1	3	33	10	11	59	46	5	40	54	2	42	3
21	9	6	42	15	2	20	22	1	6	43	10	25	10	21	5	47	35	2	45	14
22	9	19	52	50	2	27	3	1	9	54	11	8	20	56	5	54	16	2	48	24
23	10	3	3	25	2	33	45	1	13	5	11	21	31	31	6	0	57	2	51	35
24	10	16	14	0	2	40	26	1	16	15	0	4	42	6	6	7	38	2	54	45
25	10	29	24	36	2	47	7	1	19	26	0	17	52	41	6	14	19	2	57	56
26	11	12	35	11	2	53	48	1	22	37	1	1	3	16	6	21	0	3	1	7
27	11	25	45	46	3	0	29	1	25	47	1	14	13	51	6	27	41	3	4	18
28	0	8	56	21	3	7	10	1	28	58	1	27	24	26	6	34	22	3	7	28
29	0	22	6	56	3	13	51	1	32	9										
30	1	5	17	31	3	20	32	1	35	19										
31	1	18	28	6	3	27	13	1	38	30										

In Anno Biſſextili *poſt* Februarium *adde unius diei motum.*

MEDII MOTUS LUNÆ, APOGEI ET NODORUM EJUS AD DIES MENSIUM.

	MARTII.										APRILIS.									
Die Menſis.	Motus Medius Lunæ.				Motus Apogei.			Mot. Nod. Retrog.			Motus Medius Lunæ.				Motus Apogei.			Mot. Nod. Retrog.		
	s.	o.	'	''	o.	'	''	o.	'	''	s.	o.	'	''	o.	'	''	o.	'	''
1	2	10	35	1	6	41	4	3	10	39	3	29	3	7	10	8	17	4	49	9
2	2	23	45	36	6	47	45	3	13	49	4	12	13	42	10	14	58	4	52	19
3	3	6	56	11	6	54	26	3	17	0	4	25	24	17	10	21	39	4	55	30
4	3	20	6	46	7	1	7	3	20	11	5	8	34	52	10	28	20	4	58	41
5	4	3	17	21	7	7	48	3	23	21	5	21	45	27	10	35	1	5	1	51
6	4	16	27	57	7	14	29	3	26	32	6	4	56	2	10	41	42	5	5	2
7	4	29	38	32	7	21	10	3	29	43	6	18	6	37	10	48	24	5	8	12
8	5	12	49	7	7	27	51	3	32	53	7	1	17	12	10	55	5	5	11	23
9	5	25	59	42	7	34	32	3	36	4	7	14	27	47	11	1	46	5	14	34
10	6	9	10	17	7	41	13	3	39	14	7	27	38	22	11	8	27	5	17	44
11	6	22	20	52	7	47	54	3	42	25	8	10	48	57	11	15	8	5	20	55
12	7	5	31	27	7	54	35	3	45	36	8	23	59	32	11	21	49	5	24	6
13	7	18	42	2	8	1	17	3	48	46	9	7	10	7	11	28	30	5	27	16
14	8	1	52	37	8	7	58	3	51	57	9	20	20	42	11	35	11	5	30	27
15	8	15	3	12	8	14	39	3	55	8	10	3	31	17	11	41	52	5	33	38
16	8	28	13	47	8	21	20	3	58	18	10	16	41	52	11	48	33	5	36	48
17	9	11	24	22	8	28	1	4	1	29	10	29	52	27	11	55	14	5	39	59
18	9	24	34	57	8	34	42	4	4	40	11	13	3	2	12	1	55	5	43	9
19	10	7	45	32	8	41	23	4	7	50	11	26	13	37	12	8	36	5	46	20
20	10	20	56	7	8	48	4	4	11	1	0	9	24	12	12	15	17	5	49	31
21	11	4	6	42	8	54	45	4	14	12	0	22	34	47	12	21	59	5	52	41
22	11	17	17	17	9	1	26	4	17	22	1	5	45	22	12	28	40	5	55	52
23	0	0	27	52	9	8	7	4	20	33	1	18	55	57	12	35	21	5	59	3
24	0	13	38	27	9	14	48	4	23	43	2	2	6	32	12	42	2	6	2	13
25	0	26	49	2	9	21	29	4	26	54	2	15	17	7	12	48	43	6	5	24
26	1	9	59	37	9	28	10	4	30	5	2	28	27	42	12	55	24	6	8	35
27	1	23	10	12	9	34	51	4	33	15	3	11	38	17	13	2	5	6	11	45
28	2	6	20	47	9	41	33	4	36	26	3	24	48	52	13	8	46	6	14	56
29	2	19	31	22	9	48	14	4	39	37	4	7	59	27	13	15	27	6	18	6
30	3	2	41	57	9	54	55	4	42	47	4	21	10	2	13	22	8	6	21	17
31	3	15	52	32	10	1	36	4	45	58										

MEDII MOTVS LVNÆ, APOGEI ET NODORVM EJVS AD DIES MENSIVM.

Die Menſis.	MAII.										JUNII.									
	Motus Medius Lunæ.				*Motus Apogei.*			*Mot. Nod. Retrog.*			*Motus Medius Lunæ.*				*Motus Apogei.*			*Mot. Nod. Retrog.*		
	s.	o.	′	″	o.	′	″	o.	′	″	s.	o.	′	″	o.	′	″	o.	′	″
1	5	4	20	37	13	28	49	6	24	28	6	22	48	43	16	56	2	8	2	58
2	5	17	31	12	13	35	30	6	27	38	7	5	59	18	17	2	43	8	6	8
3	6	0	41	48	13	42	11	6	30	49	7	19	9	53	17	9	24	8	9	19
4	6	13	52	23	13	48	52	6	34	0	8	2	20	28	17	16	5	8	12	30
5	6	27	2	58	13	55	33	6	37	10	8	15	31	3	17	22	46	8	15	40
6	7	10	13	33	14	2	14	6	40	21	8	28	41	38	17	29	27	8	18	51
7	7	23	24	8	14	8	56	6	43	31	9	11	52	13	17	36	9	8	22	1
8	8	6	34	43	14	15	37	6	46	42	9	25	2	49	17	42	50	8	25	12
9	8	19	45	18	14	22	18	6	49	53	10	8	13	24	17	49	31	8	28	23
10	9	2	55	53	14	28	59	6	53	3	10	21	23	59	17	56	12	8	31	33
11	9	16	6	28	14	35	40	6	56	14	11	4	34	34	18	2	53	8	34	44
12	9	29	17	3	14	42	21	6	59	25	11	17	45	9	18	9	34	8	37	55
13	10	12	27	38	14	49	2	7	2	35	0	0	55	44	18	16	15	8	41	5
14	10	25	38	13	14	55	43	7	5	46	0	14	6	19	18	22	56	8	44	16
15	11	8	48	48	15	2	24	7	8	57	0	27	16	54	18	29	37	8	47	27
16	11	21	59	53	15	9	5	7	12	7	1	10	27	29	18	36	18	8	50	37
17	0	5	9	58	15	15	46	7	15	18	1	23	38	4	18	42	59	8	53	48
18	0	18	20	33	15	22	27	7	18	28	2	6	48	39	18	49	40	8	56	58
19	1	1	31	8	15	29	8	7	21	39	2	19	59	14	18	56	21	9	0	9
20	1	14	41	43	15	35	49	7	24	50	3	3	9	49	19	3	2	9	3	20
21	1	27	52	18	15	42	31	7	28	0	3	16	20	24	19	9	44	9	6	30
22	2	11	2	53	15	49	12	7	31	11	3	29	30	59	19	16	25	9	9	41
23	2	24	13	28	15	55	53	7	34	22	4	12	41	34	19	23	6	9	12	51
24	3	7	24	3	16	2	34	7	37	32	4	25	52	9	19	29	47	9	16	2
25	3	20	34	38	16	9	15	7	40	43	5	9	2	44	19	36	28	9	19	13
26	4	3	45	13	16	15	56	7	43	54	5	22	13	19	19	43	9	9	22	23
27	4	16	55	48	16	22	37	7	47	4	6	5	23	54	19	49	50	9	25	34
28	5	0	6	23	16	29	18	7	50	15	6	18	34	29	19	56	31	9	28	45
29	5	13	16	58	16	35	59	7	53	25	7	1	45	4	20	3	12	9	31	55
30	5	26	27	33	16	42	40	7	56	36	7	14	55	39	20	9	53	9	35	6
31	6	9	38	8	16	49	21	7	59	47										

MEDII MOTVS LVNÆ, APOGEI ET NODORVM EJVS AD DIES MENSIVM.

Die Mensis.	JULII.										AUGUSTI.									
	Motus Medius Lunæ.				*Motus Apogei.*			*Mot. Nod. Retrog.*			*Motus Medius Lunæ.*				*Motus Apogei.*			*Mot. Nod. Retrog.*		
	S.	°.	′	″	°.	′	″	°.	′	″	S.	°.	′	″	°.	′	″	°.	′	″
1	7	28	6	14	20	16	34	9	38	17	9	16	34	20	23	43	47	11	16	47
2	8	11	16	49	20	23	15	9	41	27	9	29	44	55	23	50	28	11	19	57
3	8	24	27	24	20	29	56	9	44	38	10	12	55	30	23	57	9	11	23	8
4	9	7	37	59	20	36	37	9	47	49	10	26	6	5	24	3	50	11	26	18
5	9	20	48	34	20	43	18	9	50	59	11	9	16	40	24	10	31	11	29	29
6	10	3	59	9	20	49	59	9	54	10	11	22	27	15	24	17	12	11	32	40
7	10	17	9	44	20	56	41	9	57	20	0	5	37	50	24	23	53	11	35	50
8	11	0	20	19	21	3	22	10	0	31	0	18	48	25	24	30	35	11	39	1
9	11	13	30	54	21	10	3	10	3	42	1	1	59	0	24	37	16	11	42	12
10	11	26	41	30	21	16	44	10	6	52	1	15	9	35	24	43	57	11	45	22
11	0	9	52	5	21	23	25	10	10	3	1	28	20	10	24	50	38	11	48	33
12	0	23	2	40	21	30	6	10	13	14	2	11	30	45	24	57	19	11	51	44
13	1	6	13	15	21	36	47	10	16	24	2	24	41	20	25	4	0	11	54	54
14	1	19	23	50	21	43	28	10	19	35	3	7	51	55	25	10	41	11	58	5
15	2	2	34	25	21	50	9	10	22	46	3	21	2	30	25	17	22	12	1	16
16	2	15	45	0	21	56	50	10	25	56	4	4	13	5	25	24	3	12	4	26
17	2	28	55	35	22	3	31	10	29	7	4	17	23	40	25	30	44	12	7	37
18	3	12	6	10	22	10	12	10	32	17	5	0	34	15	25	37	25	12	10	47
19	3	25	16	45	22	16	53	10	35	28	5	13	44	50	25	44	6	12	13	58
20	4	8	27	20	22	23	34	10	38	39	5	26	55	25	25	50	47	12	17	9
21	4	21	37	55	22	30	16	10	41	49	6	10	6	0	25	57	29	12	20	19
22	5	4	48	30	22	36	57	10	45	0	6	23	16	35	26	4	10	12	23	30
23	5	17	59	5	22	43	38	10	48	11	7	6	27	10	26	10	51	12	26	40
24	6	1	9	40	22	50	19	10	51	21	7	19	37	45	26	17	32	12	29	51
25	6	14	20	15	22	57	0	10	54	32	8	2	48	20	26	24	13	12	33	2
26	6	27	30	50	23	3	41	10	57	43	8	15	58	55	26	30	54	12	36	13
27	7	10	41	25	23	10	22	11	0	53	8	29	9	30	26	37	35	12	39	23
28	7	23	52	0	23	17	3	11	4	4	9	12	20	5	26	44	16	12	42	34
29	8	7	2	35	23	23	44	11	7	14	9	25	30	40	26	50	57	12	45	44
30	8	20	13	10	23	30	25	11	10	25	10	8	41	15	26	57	38	12	48	55
31	9	3	23	45	23	37	6	11	13	36	10	21	51	50	27	4	19	12	52	6

MEDII MOTUS LUNÆ, APOGEI ET NODORUM EJUS AD DIES MENSIUM.

Die Menſis.	SEPTEMBRIS.			OCTOBRIS.		
	Motus Medius Lunæ.	*Motus Apogei.*	*Mot. Nod. Retrog.*	*Motus Medius Lunæ.*	*Motus Apogei.*	*Mot. Nod. Retrog.*
	s. °. ′ ″	s. °. ′ ″	°. ′ ″	s. °. ′ ″	s. °. ′ ″	°. ′ ″
1	11 5 2 26	0 27 11 0	12 55 17	0 10 19 56	1 0 31 32	14 30 36
2	11 18 13 1	0 27 17 41	12 58 27	0 23 30 31	1 0 38 13	14 33 46
3	0 1 23 36	0 27 24 22	13 1 38	1 6 41 6	1 0 44 54	14 36 57
4	0 14 34 11	0 27 31 3	13 4 49	1 19 51 41	1 0 51 35	14 40 8
5	0 27 44 46	0 27 37 44	13 7 59	2 3 2 16	1 0 58 16	14 43 18
6	1 10 55 21	0 27 44 25	13 11 10	2 16 12 51	1 1 4 57	14 46 29
7	1 24 5 56	0 27 51 6	13 14 20	2 29 23 26	1 1 11 39	14 49 39
8	2 7 16 31	0 27 57 48	13 17 31	3 12 34 1	1 1 18 20	14 52 50
9	2 20 27 6	0 28 4 29	13 20 42	3 25 44 36	1 1 25 1	14 56 1
10	3 3 37 41	0 28 11 10	13 23 52	4 8 55 11	1 1 31 42	14 59 11
11	3 16 48 16	0 28 17 51	13 27 3	4 22 5 46	1 1 38 23	15 2 22
12	3 29 58 51	0 28 24 32	13 30 14	5 5 16 21	1 1 45 4	15 5 33
13	4 13 9 26	0 28 31 13	13 33 24	5 18 26 56	1 1 51 45	15 8 43
14	4 26 20 1	0 28 37 54	13 36 35	6 1 37 31	1 1 58 27	15 11 54
15	5 9 30 36	0 28 44 35	13 39 46	6 14 48 6	1 2 5 8	15 15 5
16	5 22 41 11	0 28 51 16	13 42 56	6 27 58 41	1 2 11 49	15 18 15
17	6 5 51 46	0 28 57 57	13 46 7	7 11 9 16	1 2 18 30	15 21 26
18	6 19 2 21	0 29 4 38	13 49 17	7 24 19 51	1 2 25 11	15 24 36
19	7 2 12 56	0 29 11 19	13 52 28	8 7 30 26	1 2 31 52	15 27 47
20	7 15 23 31	0 29 18 0	13 55 39	8 20 41 1	1 2 38 33	15 30 58
21	7 28 34 6	0 29 24 42	13 58 49	9 3 51 36	1 2 45 14	15 34 8
22	8 11 44 41	0 29 31 23	14 2 0	9 17 2 11	1 2 51 55	15 37 19
23	8 24 55 16	0 29 38 4	14 5 11	10 0 12 46	1 2 58 36	15 40 29
24	9 8 5 51	0 29 44 45	14 8 21	10 13 23 21	1 3 5 17	15 43 40
25	9 21 16 26	0 29 51 26	14 11 32	10 26 33 56	1 3 11 58	15 46 51
26	10 4 27 1	0 29 58 7	14 14 42	11 9 44 31	1 3 18 39	15 50 1
27	10 17 37 36	1 0 4 48	14 17 53	11 22 55 6	1 3 25 20	15 53 12
28	11 0 48 11	1 0 11 29	14 21 4	0 6 5 41	1 3 32 2	15 56 22
29	11 13 58 46	1 0 18 10	14 24 14	0 19 16 16	1 3 38 43	15 59 33
30	11 27 9 21	1 0 24 51	14 27 25	1 2 26 51	1 3 45 24	16 2 44
31				1 15 37 26	1 3 52 5	16 5 55

MEDII MOTVS LVNÆ, APOGEI ET NODORVM EJVS AD DIES MENSIVM.

Die Menſis.	NOVEMBRIS.											DECEMBRIS.										
	Motus Medius Lunæ.				*Motus Apogei.*				*Mot. Nod. Retrog.*			*Motus Medius Lunæ.*				*Motus Apogei.*				*Mot. Nod. Retrog.*		
	s.	°.	′	″	s.	°.	′	″	°.	′	″	s.	°.	′	″	s.	°.	′	″	°.	′	″
1	1	28	48	1	1	3	58	46	16	9	6	3	4	5	32	1	7	19	18	17	44	25
2	2	11	58	36	1	4	5	27	16	12	16	3	17	16	7	1	7	25	59	17	47	35
3	2	25	9	12	1	4	12	8	16	15	27	4	0	26	42	1	7	32	40	17	50	46
4	3	8	19	47	1	4	18	49	16	18	38	4	13	37	17	1	7	39	21	17	53	57
5	3	21	30	22	1	4	25	30	16	21	48	4	26	47	52	1	7	46	2	17	57	7
6	4	4	40	57	1	4	32	11	16	24	59	5	9	58	27	1	7	52	43	18	0	18
7	4	17	51	32	1	4	38	53	16	28	9	5	23	9	2	1	7	59	25	18	3	28
8	5	1	2	7	1	4	45	34	16	31	20	6	6	19	37	1	8	6	6	18	6	39
9	5	14	12	42	1	4	52	15	16	34	31	6	19	30	12	1	8	12	47	18	9	50
10	5	27	23	17	1	4	58	56	16	37	41	7	2	40	47	1	8	19	28	18	13	0
11	6	10	33	52	1	5	5	37	16	40	52	7	15	51	22	1	8	26	9	18	16	11
12	6	23	44	27	1	5	12	18	16	44	3	7	29	1	57	1	8	32	50	18	19	22
13	7	6	55	2	1	5	18	59	16	47	13	8	12	12	32	1	8	39	31	18	22	32
14	7	20	5	37	1	5	25	40	16	50	24	8	25	23	7	1	8	46	12	18	25	43
15	8	3	16	12	1	5	32	21	16	53	35	9	8	33	42	1	8	52	53	18	28	54
16	8	16	26	47	1	5	39	2	16	56	45	9	21	44	17	1	8	59	34	18	32	4
17	8	29	37	22	1	5	45	43	16	59	56	10	4	54	52	1	9	6	15	18	35	15
18	9	12	47	57	1	5	52	24	17	3	6	10	18	5	28	1	9	12	56	18	38	25
19	9	25	58	32	1	5	59	5	17	6	17	11	1	16	3	1	9	19	37	18	41	36
20	10	9	9	7	1	6	5	46	17	9	28	11	14	26	38	1	9	26	18	18	44	47
21	10	22	19	42	1	6	12	28	17	12	38	11	27	37	13	1	9	33	0	18	47	57
22	11	5	30	17	1	6	19	9	17	15	49	0	10	47	48	1	9	39	41	18	51	8
23	11	18	40	52	1	6	25	50	17	19	0	0	23	58	23	1	9	46	22	18	54	19
24	0	1	51	27	1	6	32	31	17	22	10	1	7	8	58	1	9	53	3	18	57	29
25	0	15	2	2	1	6	39	12	17	25	21	1	20	19	33	1	9	59	44	19	0	40
26	0	28	12	37	1	6	45	53	17	28	32	2	3	30	8	1	10	6	25	19	3	51
27	1	11	23	12	1	6	52	34	17	31	42	2	16	40	43	1	10	13	6	19	7	1
28	1	24	33	47	1	6	59	15	17	34	53	2	29	51	18	1	10	19	47	19	10	12
29	2	7	44	22	1	7	5	56	17	38	3	3	13	1	53	1	10	26	28	19	13	22
30	2	20	54	57	1	7	12	37	17	41	14	3	26	12	28	1	10	33	9	19	16	33
31												4	9	23	3	1	10	39	50	19	19	43

MEDII MOTVS LVNÆ, APOGEI ET NODORVM AD HORAS ET MINVTA HORARIA.

″ ′ H.	*Mot. Med. Lunæ.* ″ ′ °.	 ‴ ″ ′	 ⁗ ‴ ″	*Apogei Lunæ.* ″ ′ °.	 ‴ ″ ′	 ⁗ ‴ ″	*Mot. Nod. Lunæ.* ″ ′ °.	 ‴ ″ ′	 ⁗ ‴ ″	″ ′ H.	*Mot. Med. Lunæ.* ″ ′ °.	 ‴ ″ ′	 ⁗ ‴ ″	*Apogei Lunæ.* ″ ′ °.	 ‴ ″ ′	 ⁗ ‴ ″	*Mot. Nod. Lunæ.* ″ ′ °.	 ‴ ″ ′	 ⁗ ‴ ″
0	0	0	0	0	0	0	0	0	0	30	16	28	14	0	8	21	0	3	58
1	0	32	56	0	0	17	0	0	8	31	17	1	10	0	8	38	0	4	6
2	1	5	53	0	0	33	0	0	16	32	17	34	7	0	8	54	0	4	14
3	1	38	49	0	0	50	0	0	24	33	18	7	3	0	9	11	0	4	22
4	2	11	46	0	1	7	0	0	32	34	18	39	59	0	9	28	0	4	30
5	2	44	42	0	1	24	0	0	40	35	19	12	55	0	9	45	0	4	38
6	3	17	39	0	1	40	0	0	48	36	19	45	52	0	10	2	0	4	46
7	3	50	35	0	1	57	0	0	56	37	20	18	48	0	10	19	0	4	54
8	4	23	32	0	2	14	0	1	4	38	20	51	45	0	10	36	0	5	2
9	4	56	28	0	2	30	0	1	12	39	21	24	41	0	10	52	0	5	10
10	5	29	25	0	2	47	0	1	19	40	21	57	38	0	11	8	0	5	18
11	6	2	21	0	3	4	0	1	27	41	22	30	34	0	11	25	0	5	26
12	6	35	18	0	3	21	0	1	35	42	23	3	31	0	11	42	0	5	34
13	7	8	14	0	3	37	0	1	43	43	23	36	27	0	11	59	0	5	42
14	7	41	10	0	3	54	0	1	51	44	24	9	24	0	12	16	0	5	50
15	8	14	7	0	4	11	0	1	59	45	24	42	20	0	12	32	0	5	57
16	8	47	3	0	4	27	0	2	7	46	25	15	17	0	12	48	0	6	5
17	9	20	0	0	4	44	0	2	15	47	25	48	13	0	13	5	0	6	13
18	9	52	56	0	5	1	0	2	23	48	26	21	10	0	13	22	0	6	21
19	10	25	53	0	5	18	0	2	31	49	26	54	6	0	13	39	0	6	29
20	10	58	49	0	5	34	0	2	39	50	27	27	3	0	13	56	0	6	37
21	11	31	46	0	5	51	0	2	47	51	27	59	59	0	14	13	0	6	45
22	12	4	42	0	6	8	0	2	55	52	28	32	56	0	14	30	0	6	53
23	12	37	39	0	6	24	0	3	3	53	29	5	52	0	14	46	0	7	1
24	13	10	35	0	6	41	0	3	11	54	29	38	49	0	15	2	0	7	9
25	13	43	32	0	6	58	0	3	19	55	30	11	45	0	15	19	0	7	17
26	14	16	28	0	7	15	0	3	27	56	30	44	42	0	15	36	0	7	25
27	14	49	24	0	7	31	0	3	34	57	31	17	38	0	15	53	0	7	33
28	15	22	21	0	7	48	0	3	42	58	31	50	34	0	16	10	0	7	41
29	15	55	17	0	8	5	0	3	50	59	32	23	31	0	16	26	0	7	49
30	16	28	14	0	8	21	0	3	58	60	32	56	27	0	16	43	0	7	56

TABVLA MEDII MOTVS LVNÆ, APOGEI ET NODORVM AB ÆQVINOCTIO, AC LVNÆ A SOLE.

IN CENTVRIIS ANNORVM JVLIANORVM.

Annis Julianis.	Motus Medius Lunæ.				Motus Apogei Lunæ.				Motus Nodorum Lunæ Retrog.				Motus Lunæ a Sole.			
	s.	o.	′	″	s.	o.	′	″	s.	o.	′	″	s.	o.	′	″
100	10	7	50	25	3	19	11	15	4	14	11	15	10	7	4	53
200	8	15	40	50	7	8	22	30	8	28	22	30	8	14	9	46
300	6	23	31	15	10	27	33	45	1	12	33	45	6	21	14	39
400	5	1	21	40	2	16	45	0	5	26	45	0	4	28	19	32
500	3	9	12	5	6	5	56	15	10	10	56	15	3	5	24	25
600	1	17	2	30	9	25	7	30	2	25	7	30	1	12	29	18
700	11	24	52	55	1	14	18	45	7	9	18	45	11	19	34	11
800	10	2	43	20	5	3	30	0	11	23	30	0	9	26	39	4
900	8	10	33	45	8	22	41	15	4	7	41	15	8	3	43	57
1000	6	18	24	10	0	11	52	30	8	21	52	30	6	10	48	50
1100	4	26	14	35	4	1	3	45	1	6	3	45	4	17	53	43
1200	3	4	5	0	7	20	15	0	5	20	15	0	2	24	58	36
1300	1	11	55	25	11	9	26	15	10	4	26	15	1	2	3	29
1400	11	19	45	50	2	28	37	30	2	18	37	30	11	9	8	22
1500	9	27	36	15	6	17	48	45	7	2	48	45	9	16	13	15
1600	8	5	26	40	10	7	0	0	11	17	0	0	7	23	18	8
1700	6	13	17	5	1	26	11	15	4	1	11	15	6	0	23	1
1800	4	21	7	30	5	15	22	30	8	15	22	30	4	7	27	54
1900	2	28	57	55	9	4	33	45	0	29	33	45	2	14	32	47
2000	1	6	48	20	0	23	45	0	5	13	45	0	0	21	37	40
2100	11	14	38	45	4	12	56	15	9	27	56	15	10	28	42	33
2200	9	22	29	10	8	2	7	30	2	12	7	30	9	5	47	26
2300	8	0	19	35	11	21	18	45	6	26	18	45	7	12	52	19
2400	6	8	10	0	3	10	30	0	11	10	30	0	5	19	57	12
2500	4	16	0	25	6	29	41	15	3	24	41	15	3	27	2	5
2600	2	23	50	50	10	18	52	30	8	8	52	30	2	4	6	58
2700	1	1	41	15	2	8	3	45	0	23	3	45	0	11	11	51
2800	11	9	31	40	5	27	15	0	5	7	15	0	10	18	16	44
2900	9	17	22	5	9	16	26	15	9	21	26	15	8	25	21	37
3000	7	25	12	30	1	5	37	30	2	5	37	30	7	2	26	30
3100	6	3	2	55	4	24	48	45	6	19	48	45	5	9	31	23
3200	4	10	53	20	8	14	0	0	11	4	0	0	3	16	36	16

TABULA ÆQUATIONUM ANNUARUM LUNÆ, APOGEI ET NODORUM.

Anomalia Media Solis.

Anomal. med. Solis	Sig. 0.			Sig. I.			Sig. II.			
	Æq. D. Adde.	*Apog. Subtr.*	*Nod. Adde.*	*Lunæ Adde.*	*Apog. Subtr.*	*Nod Adde.*	*Lunæ Adde.*	*Apog. Subtr.*	*Nod. Adde.*	
Gr.	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	
0	0 0	0 0	0 0	5 47	9 49	4 40	10 7	17 8	8 9	30
1	0 12	0 20	0 9	5 58	10 7	4 48	10 14	17 19	8 14	29
2	0 24	0 41	0 19	6 9	10 24	4 57	10 20	17 29	8 19	28
3	0 36	1 1	0 29	6 19	10 42	5 5	10 26	17 39	8 24	27
4	0 48	1 22	0 39	6 29	10 59	5 13	10 31	17 48	8 28	26
5	1 0	1 42	0 48	6 39	11 16	5 21	10 37	17 58	8 32	25
6	1 12	2 3	0 58	6 49	11 33	5 29	10 42	18 7	8 36	24
7	1 24	2 23	1 8	6 59	11 49	5 37	10 47	18 16	8 40	23
8	1 36	2 43	1 18	7 9	12 6	5 45	10 52	18 24	8 44	22
9	1 48	3 4	1 27	7 19	12 22	5 53	10 56	18 32	8 48	21
10	1 59	3 24	1 37	7 28	12 39	6 0	11 1	18 39	8 52	20
11	2 11	3 44	1 46	7 37	12 55	6 8	11 5	18 46	8 55	19
12	2 23	4 4	1 56	7 46	13 10	6 15	11 9	18 53	8 58	18
13	2 35	4 24	2 5	7 55	13 26	6 22	11 14	19 0	9 2	17
14	2 46	4 44	2 15	8 4	13 41	6 30	11 19	19 6	9 5	16
15	2 58	5 4	2 24	8 13	13 56	6 37	11 22	19 12	9 7	15
16	3 10	5 24	2 34	8 22	14 10	6 44	11 25	19 18	9 10	14
17	3 22	5 44	2 43	8 31	14 25	6 50	11 28	19 23	9 12	13
18	3 34	6 3	2 53	8 39	14 39	6 57	11 30	19 28	9 15	12
19	3 46	6 23	3 2	8 47	14 53	7 4	11 32	19 33	9 17	11
20	3 57	6 43	3 11	8 55	15 7	7 11	11 35	19 37	9 19	10
21	4 9	7 2	3 20	9 3	15 21	7 17	11 38	19 41	9 21	9
22	4 20	7 21	3 29	9 11	15 33	7 23	11 40	19 44	9 22	8
23	4 31	7 40	3 38	9 19	15 46	7 29	11 42	19 48	9 24	7
24	4 42	7 59	3 47	9 27	15 58	7 35	11 43	19 51	9 25	6
25	4 53	8 18	3 56	9 34	16 11	7 41	11 45	19 53	9 26	5
26	5 4	8 36	4 5	9 41	16 23	7 46	11 46	19 55	9 27	4
27	5 15	8 54	4 14	9 47	16 35	7 52	11 47	19 57	9 28	3
28	5 26	9 13	4 23	9 54	16 46	7 58	11 48	19 58	9 29	2
29	5 37	9 31	4 31	10 1	16 57	8 4	11 48	19 59	9 29	1
30	5 47	9 49	4 40	10 7	17 8	8 9	11 49	20 0	9 30	0
	Subtr.	*Adde.*	*Subtr.*	*Subtr.*	*Adde.*	*Subtr.*	*Subtr.*	*Adde.*	*Subtr.*	*Gr.*
	Sig. XI.			Sig. X.			Sig. IX.			

TABVLA ÆQVATIONVM ANNVARVM LVNÆ, APOGEI ET NODORVM.

Anomalia Media Solis.

Anomal. med. Solis.	Sig. III.			Sig. IV.			Sig. V.			
	Æq. ☽. Adde.	*Apog. Subtr.*	*Nod. Adde.*	*Lunæ Adde.*	*Apog. Subtr.*	*Nod. Adde.*	*Lunæ Adde.*	*Apog. Subtr.*	*Nod. Adde.*	
Gr.	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	
0	11 49	20 0	9 30	10 21	17 30	8 19	6 0	10 11	4 50	30
1	11 49	20 0	9 30	10 15	17 20	8 14	5 49	9 52	4 41	29
2	11 49	20 0	9 30	10 7	17 9	8 9	5 38	9 33	4 32	28
3	11 48	19 59	9 30	10 1	16 58	8 4	5 27	9 15	4 23	27
4	11 48	19 58	9 29	9 55	16 46	7 58	5 16	8 56	4 14	26
5	11 47	19 57	9 29	9 47	16 34	7 53	5 5	8 37	4 5	25
6	11 47	19 56	9 28	9 40	16 23	7 48	4 53	8 17	3 56	24
7	11 45	19 54	9 27	9 33	16 11	7 42	4 42	7 58	3 47	23
8	11 44	19 51	9 26	9 26	15 58	7 35	4 30	7 38	3 38	22
9	11 42	19 49	9 25	9 19	15 45	7 29	4 18	7 18	3 29	21
10	11 41	19 46	9 24	9 11	15 32	7 23	4 6	6 58	3 19	20
11	11 39	19 42	9 22	9 2	15 18	7 16	3 54	6 38	3 9	19
12	11 36	19 38	9 20	8 54	15 4	7 9	3 43	6 18	2 59	18
13	11 34	19 34	9 18	8 46	14 50	7 3	3 31	5 58	2 50	17
14	11 31	19 30	9 16	8 37	14 36	6 56	3 19	5 38	2 40	16
15	11 29	19 25	9 14	8 28	14 21	6 49	3 7	5 17	2 30	15
16	11 25	19 20	9 12	8 20	14 6	6 42	2 54	4 56	2 20	14
17	11 22	19 14	9 9	8 11	13 51	6 35	2 42	4 35	2 10	13
18	11 19	19 8	9 6	8 1	13 35	6 27	2 30	4 14	2 0	12
19	11 15	19 2	9 3	7 52	13 20	6 20	2 18	3 54	1 50	11
20	11 11	18 55	8 59	7 43	13 4	6 12	2 5	3 33	1 40	10
21	11 6	18 48	8 56	7 34	12 48	6 4	1 52	3 12	1 30	9
22	11 2	18 41	8 52	7 24	12 31	5 56	1 40	2 51	1 20	8
23	10 58	18 33	8 49	7 14	12 15	5 49	1 28	2 30	1 10	7
24	10 53	18 25	8 45	7 3	11 58	5 41	1 15	2 8	1 0	6
25	10 48	18 17	8 41	6 53	11 41	5 33	1 2	1 46	0 50	5
26	10 43	18 8	8 37	6 43	11 23	5 24	0 49	1 25	0 40	4
27	10 38	17 59	8 33	6 33	11 5	5 16	0 37	1 4	0 30	3
28	10 32	17 50	8 28	6 22	10 47	5 8	0 25	0 43	0 20	2
29	10 26	17 40	8 23	6 11	10 29	4 59	0 12	0 21	0 10	1
30	10 21	17 30	8 19	6 0	10 11	4 50	0 0	0 0	0 0	0
	Subtr.	*Adde.*	*Subtr.*	*Subtr.*	*Adde.*	*Subtr.*	*Subtr.*	*Adde.*	*Subtr.*	*Gr.*
	Sig. VIII.			Sig. VII.			Sig. VI.			

ÆQVATIONES LVNÆ MINORES.

Æquatio Semeſtris prima.

Argumentum Annuum.

Sig.	0. 6. Subtr.	1. 7. Subtr.	2. 8. Subtr.	
Gr.	′ ″	′ ″	′ ″	
0	0 0	3 15	3 15	30
1	0 8	3 19-	3 11	29
2	0 16	3 22-	3 6-	28
3	0 23-	3 25-	3 2	27
4	0 31	3 28-	2 57	26
5	0 39	3 31	2 52	25
6	0 47	3 34	2 47	24
7	0 54-	3 36	2 41-	23
8	1 2	3 38-	2 36	22
9	1 9-	3 40	2 30	21
10	1 17	3 42	2 24	20
11	1 24	3 43	2 18	19
12	1 31-	3 44	2 12	18
13	1 38-	3 44-	2 5-	17
14	1 46	3 45	1 59	16
15	1 52-	3 45	1 52-	15
16	1 59	3 45	1 46	14
17	2 5-	3 44-	1 38-	13
18	2 12	3 44	1 31-	12
19	2 18	3 43	1 24	11
20	2 24	3 42	1 17	10
21	2 30	3 40	1 9-	9
22	2 36	3 38-	1 2	8
23	2 41-	3 36	0 54-	7
24	2 47	3 34	0 47	6
25	2 52	3 31	0 39	5
26	2 57	3 28-	0 31	4
27	3 2	3 25	0 23-	3
28	3 6-	3 22-	0 16	2
29	3 11	3 19-	0 8	1
30	3 15	3 15	0 0	0
Sig.	5. 11. Adde.	4. 10. Adde.	3. 9. Adde.	Gr.

Æquatio Semeſtris altera.

Solis a Nodo Diſtantia.

Sig.	0. 6. Subtr.	1. 7. Subtr.	2. 8. Subtr.	
Gr.	′ ″	′ ″	′ ″	
0	0 0	0 41	0 41	30
1	0 1-	0 41-	0 40	29
2	0 3	0 42	0 39	28
3	0 5	0 43	0 38	27
4	0 6-	0 43-	0 37	26
5	0 8	0 44	0 36	25
6	0 10	0 44-	0 35	24
7	0 11-	0 45	0 34	23
8	0 13	0 45-	0 32-	22
9	0 14-	0 46	0 31-	21
10	0 16	0 46-	0 30	20
11	0 17-	0 46-	0 29	19
21	0 19	0 47	0 27-	18
13	0 20-	0 47	0 26-	17
14	0 22	0 47	0 25	16
15	0 23-	0 47	0 23-	15
16	0 25	0 47	0 22	14
17	0 26-	0 47	0 20-	13
18	0 27-	0 47	0 19	12
19	0 29	0 46-	0 17-	11
20	0 30	0 46-	0 16	10
21	0 31-	0 46	0 14-	9
22	0 32-	0 45-	0 13	8
23	0 34	0 45	0 11-	7
24	0 35	0 44-	0 10	6
25	0 36	0 44	0 8	5
26	0 37	0 43-	0 6-	4
27	0 38	0 43	0 5	3
28	0 39	0 42	0 3	2
29	0 40	0 41-	0 1-	1
30	0 41	0 41	0 0	0
Sig.	5. 11. Adde.	4. 10. Adde.	3. 9. Adde.	Gr.

Æquatio Quarta Lunæ.

Argument. Quartæ Æquationis.

Sig.	0 Add. 6 Subtr.	1 Add. 7 Subtr.	2 Add. 8 Sub.	
Gr.	′ ″	′ ″	′ ″	
0	0 0	1 12-	2 5-	30
1	0 2-	1 15	2 7	29
2	0 5	1 17	2 8	28
3	0 7-	1 19	2 9	27
4	0 10	1 21	2 10	26
5	0 12-	1 23	2 11	25
6	0 15	1 25	2 12	24
7	0 17-	1 27	2 13	23
8	0 20	1 29	2 14	22
9	0 22-	1 31	2 15	21
10	0 25	1 33	2 16	20
11	0 27-	1 35	2 17	19
12	0 30	1 37	2 17	18
13	0 32-	1 39	2 18	17
14	0 35	1 41	2 19	16
15	0 37-	1 43	2 20	15
16	0 40	1 44-	2 20	14
17	0 42	1 46	2 21	13
18	0 44	1 48	2 21	12
19	0 46-	1 49-	2 22	11
20	0 49	1 51	2 22	10
21	0 51-	1 52-	2 23	9
22	0 54	1 54	2 23	8
23	0 56-	1 55-	2 24	7
24	0 59	1 57	2 24	6
25	1 1	1 58	2 24	5
26	1 3	2 0	2 24	4
27	1 5-	2 1-	2 25	3
28	1 8	2 3	2 25	2
29	1 10-	2 4-	2 25	1
30	1 12-	2 5	2 25	0
Sig.	5 Add. 11 Sub.	4 Add. 10 Sub.	3 Add. 9 Sub.	Gr.

TABULA ÆQUATIONUM APOGEI ET ECCENTRICITATUM ORBIS LUNÆ.

Sig. O. VI.

Argument. Ann.	*Æqu. Apog. Lunæ Adde.*	*Diff.*	*Eccentric. Orbis Lunæ ad Radium* 1.	*Diff.*	*Logarithmi harum Eccentricitatum.*	*Logarithmi pro Æquatione centri Lunæ.*	*Diff.*	
Gr.	° ′ ″	′ ″						
0	0 0 0		,066777		8 824629	9 941912		30
1	0 21 4	21 4	,066771	5	8 824590	9 941917	5	29
2	0 42 8	21 4	,066754	17	8 824475	9 941932	15	28
3	1 3 10	21 2	,066724	30	8 824284	9 941958	26	27
4	1 24 9	20 59	,066683	41	8 824016	9 941994	36	26
5	1 45 5	20 56	,066630	53	8 823671	9 942040	46	25
6	2 5 57	20 52	,066566	64	8 823252	9 942096	56	24
7	2 26 44	20 47	,066489	76	8 822753	9 942163	67	23
8	2 47 25	20 41	,066402	88	8 822179	9 942239	76	22
9	3 8 0	20 35	,066302	100	8 821529	9 942326	87	21
10	3 28 27	20 27	,066192	110	8 820803	9 942422	96	20
11	3 48 46	20 19	,066070	121	8 820001	9 942529	107	19
12	4 8 55	20 9	,065936	133	8 819124	9 942645	116	18
13	4 28 54	19 59	,065792	144	8 818170	9 942771	126	17
14	4 48 42	19 48	,065636	156	8 817142	9 942907	135	16
15	5 8 19	19 37	,065469	167	8 816038	9 943053	146	15
16	5 27 43	19 24	,065292	177	8 814858	9 943208	155	14
17	5 46 53	19 10	,065103	188	8 813604	9 943372	164	13
18	6 5 48	18 55	,064905	198	8 812275	9 943545	173	12
19	6 24 27	18 39	,064695	209	8 810873	9 943728	183	11
20	6 42 50	18 23	,064476	219	8 809397	9 943919	191	10
21	7 0 56	18 6	,064246	230	8 807847	9 944120	201	9
22	7 18 44	17 48	,064006	239	8 806223	9 944329	209	8
23	7 36 12	17 28	,063757	249	8 804528	9 944546	217	7
24	7 53 20	17 8	,063498	259	8 802760	9 944772	226	6
25	8 10 6	16 46	,063230	268	8 800920	9 945006	234	5
26	8 26 29	16 23	,062952	277	8 799009	9 945248	242	4
27	8 42 29	16 0	,062665	287	8 797028	9 945498	250	3
28	8 58 5	15 36	,062370	295	8 794978	9 945755	257	2
29	9 13 15	15 10	,062066	303	8 792857	9 946020	265	1
30	9 27 57	14 42	,061754	312	8 790668	9 946292	272	0
	Subtrahe.	*Diff.*		*Diff.*			*Diff.*	*Gr.*

Sig. V. XI.

TABULA ÆQUATIONUM APOGEI ET ECCENTRICITATUM ORBIS LUNÆ.

Sig. I. VII.

Argument. Ann.	Æqu. Apog. Lunæ Adde.	Diff.	Eccentric. Orbis Lunæ ad Radium 1.	Diff.	Logarithmi harum Eccentricitatum.	Logarithmi pro Æquatione centri Lunæ.	Diff.	
Gr.	°. ′ ″	′ ″						
0	9 27 57	14 15	,061754	320	8 790668	9 946292	279	30
1	9 42 12	13 46	,061434	327	8 788412	9 946571	286	29
2	9 55 58	13 16	,061107	335	8 786089	9 946857	292	28
3	10 9 14	12 44	,060772	342	8 783701	9 947149	298	27
4	10 21 58	12 11	,060429	349	8 781248	9 947448	304	26
5	10 34 9	11 38	,060080	355	8 778732	9 947752	310	25
6	10 45 47	11 2	,059725	362	8 776153	9 948062	315	24
7	10 56 49	10 26	,059363	368	8 773513	9 948377	320	23
8	11 7 15	9 49	,058995	373	8 770814	9 948698	325	22
9	11 17 4	9 10	,058621	378	8 768057	9 949023	330	21
10	11 26 14	8 29	,058243	383	8 765243	9 949353	334	20
11	11 34 43	7 48	,057860	388	8 762375	9 949687	338	19
12	11 42 31	7 5	,057472	392	8 759454	9 950025	341	18
13	11 49 36	6 21	,057080	396	8 756482	9 950367	345	17
14	11 55 57	5 36	,056684	399	8 753461	9 950712	347	16
15	12 1 33	4 49	,056285	401	8 750395	9 951059	350	15
16	12 6 22	4 1	,055884	404	8 747284	9 951409	352	14
17	12 10 23	3 12	,055479	406	8 744131	9 951761	354	13
18	12 13 35	2 21	,055073	407	8 740941	9 952115	355	12
19	12 15 56	1 28	,054666	409	8 737714	9 952470	356	11
20	12 17 24	0 35	,054257	409	8 734455	9 952827	356	10
21	12 17 59	0 19	,053848	410	8 731167	9 953183	356	9
22	12 17 40	1 15	,053438	408	8 727853	9 953540	356	8
23	12 16 25	2 12	,053030	408	8 724518	9 953896	355	7
24	12 14 13	3 11	,052622	407	8 721164	9 954251	354	6
25	12 11 2	4 10	,052215	404	8 717796	9 954605	352	5
26	12 6 52	5 10	,051811	402	8 714419	9 954957	350	4
27	12 1 42	6 11	,051409	399	8 711037	9 955307	347	3
28	11 55 31	7 14	,051010	395	8 707654	9 955655	344	2
29	11 48 17	8 17	,050615	391	8 704277	9 955999	340	1
30	11 40 0		,050224		8 700910	9 956339		0
	Subtrahe.	Diff.		Diff.			Diff.	Gr.

Sig. IV. X.

TABULA ÆQUATIONUM APOGEI ET ECCENTRICITATUM ORBIS LUNÆ.

Sig. II. VIII.

Argument. Ann.	Æqu. Apog. Lunæ Adde.			Diff.		Eccentric. Orbis Lunæ ad Radium 1.	Diff.	Logarithmi harum Eccentricitatum.	Logarithmi pro Æquatione centri Lunæ.	Diff.	
Gr.	o.	'	"	'	"						
0	11	40	0			,050224		8 700910	9 956339		30
				9	21		386			336	
1	11	30	39			,049838		8 697559	9 956675		29
				10	25		381			331	
2	11	20	14			,049457		8 694229	9 957007		28
				11	30		374			326	
3	11	8	44			,049082		8 690927	9 957333		27
				12	36		368			320	
4	10	56	8			,048714		8 687658	9 957653		26
				13	42		360			314	
5	10	42	26			,048354		8 684430	9 957968		25
				14	48		353			307	
6	10	27	38			,048001		8 681247	9 958275		24
				15	53		345			300	
7	10	11	45			,047656		8 678118	9 958575		23
				16	58		335			292	
8	9	54	47			,047321		8 675050	9 958867		22
				18	3		325			284	
9	9	36	44			,046995		8 672049	9 959151		21
				19	7		316			274	
10	9	17	37			,046679		8 669121	9 959426		20
				20	12		305			265	
11	8	57	25			,046374		8 666277	9 959691		19
				21	14		293			255	
12	8	36	11			,046081		8 663520	9 959946		18
				22	15		281			245	
13	8	13	56			,045800		8 660861	9 960191		17
				23	14		269			234	
14	7	50	42			,045531		8 658305	9 960425		16
				24	13		256			222	
15	7	26	29			,045275		8 655859	9 960648		15
				25	8		242			210	
16	7	1	21			,045033		8 653532	9 960858		14
				26	2		227			198	
17	6	35	19			,044805		8 651331	9 961056		13
				26	53		213			186	
18	6	8	26			,044592		8 649261	9 961242		12
				27	41		198			172	
19	5	40	45			,044394		8 647329	9 961414		11
				28	27		182			159	
20	5	12	18			,044212		8 645542	9 961573		10
				29	8		166			144	
21	4	43	10			,044046		8 643906	9 961717		9
				29	47		150			131	
22	4	13	23			,043896		8 642426	9 961848		8
				30	22		133			115	
23	3	43	1			,043763		8 641108	9 961963		7
				30	52		116			101	
24	3	12	9			,043647		8 639954	9 962064		6
				31	20		98			86	
25	2	40	49			043548		8 638973	9 962150		5
				31	42		81			71	
26	2	9	7			,043467		8 638164	9 962221		4
				32	1		63			55	
27	1	37	6			,043404		8 637532	9 962276		3
				32	14		45			39	
28	1	4	52			,043359		8 637079	9 962315		2
				32	24		27			24	
29	0	32	28			,043332		8 636806	9 962339		1
				32	28		9			8	
30	0	0	9			,043323		8 636715	9 962347		0
	Subtrahe.			Diff.			Diff.			Diff.	Gr.

Sig. III. IX.

TABULA PRO EXPEDIENDO CALCULO ÆQUATIONIS CENTRI LUNÆ.

Medii Lunæ loci ab Apogeo æquato diſtantia.

	Sig. 0. *Adde.*					**Sig. I.** *Adde.*				
Log.	9 942	9 947	9 952	9 957	9 962	9 942	9 947	9 952	9 957	9 962
Gr.	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
0	0 0	0 0	0 0	0 0	0 0	1 42	1 25	1 9-	0 55-	0 43-
1	0 4	0 3-	0 3	0 2	0 2	1 44	1 27	1 11	0 57	0 44
2	0 8	0 7	0 5-	0 4	0 3-	1 46	1 28-	1 12-	0 58	0 45
3	0 12	0 10	0 8-	0 6-	0 5	1 48	1 30	1 14	0 59	0 46
4	0 16	0 13	0 11	0 9	0 7	1 49-	1 31-	1 15	1 0	0 46-
5	0 20	0 16-	0 13-	0 11	0 8-	1 51	1 33	1 16	1 1	0 47-
6	0 24	0 20	0 16	0 13	0 10	1 53	1 34	1 17	1 1-	0 48
7	0 28	0 23	0 19	0 15	0 12	1 54-	1 35-	1 18	1 2-	0 48-
8	0 31-	0 26	0 21-	0 17	0 13-	1 56	1 36-	1 19	1 3	0 49
9	0 35	0 29-	0 24	0 19-	0 15-	1 57	1 37-	1 20	1 4	0 49-
10	0 39	0 33	0 27	0 21-	0 17	1 58	1 38-	1 20-	1 4-	0 50
11	0 43	0 36	0 29-	0 23-	0 18-	1 59	1 39-	1 21-	1 5	0 50-
12	0 46-	0 39	0 32	0 25-	0 20	2 0	1 40	1 22	1 5	0 51
13	0 50	0 42	0 34-	0 28	0 21-	2 0-	1 40-	1 22	1 5-	0 51
14	0 54	0 45	0 37	0 30	0 23	2 1	1 41	1 22-	1 6	0 51
15	0 57-	0 48	0 39-	0 32	0 24-	2 1	1 41	1 23	1 6	0 51
16	1 1	0 51	0 42	0 33-	0 26	2 2	1 41-	1 23	1 6	0 51-
17	1 4-	0 54	0 44-	0 35-	0 27-	2 2-	1 41-	1 23	1 6	0 51-
18	1 8	0 57	0 46-	0 37	0 29	2 2	1 42	1 23	1 6	0 51
19	1 11	0 59-	0 48-	0 39	0 30-	2 2	1 41-	1 23	1 6	0 51
20	1 14-	1 2	0 51	0 41	0 32	2 2	1 41-	1 23	1 6	0 51
21	1 18	1 4-	0 53	0 42-	0 33-	2 1-	1 41	1 22-	1 5-	0 50-
22	1 21	1 7	0 55	0 44	0 34-	2 1	1 40-	1 22	1 5	0 50-
23	1 24	1 9-	0 57	0 46	0 36	2 0-	1 40	1 21-	1 4-	0 50
24	1 26-	1 12	0 59	0 47-	0 37	1 59-	1 39-	1 21	1 4	0 50
25	1 29-	1 14-	1 1	0 49	0 38	1 58	1 38-	1 20-	1 3-	0 49-
26	1 32	1 17	1 3	0 50-	0 39	1 57-	1 37	1 19-	1 3	0 49
27	1 34-	1 19	1 4-	0 52	0 40-	1 56-	1 36	1 19	1 2-	0 48-
28	1 37	1 21	1 6	0 53	0 41-	1 55	1 35	1 18	1 1-	0 48
29	1 39-	1 23	1 7-	0 54-	0 42-	1 54	1 34	1 17	1 1	0 47-
30	1 42	1 25	1 9-	0 55-	0 43-	1 52-	1 33	1 15-	1 0	0 46-

TABVLA PRO EXPEDIENDO CALCVLO ÆQVATIONIS CENTRI LVNÆ.

Medii Lunæ loci ab Apogæo æquato diſtantia.

	Sig. II. *Adde.*					Sig. III. *Adde.*				
Log.	9 942	9 947	9 952	9 957	9 962	9 942	9 947	9 952	9 957	9 962
Gr.	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
0	1 52-	1 33	1 15-	1 0	0 46-	0 20	0 15-	0 11-	0 8	0 6
1	1 51	1 31-	1 14-	0 59	0 46	0 16	0 12	0 9	0 6	0 4-
2	1 49	1 30	1 13	0 58	0 45	0 12	0 9	0 6	0 4	0 2-
3	1 47	1 28-	1 11-	0 57	0 44	0 8	0 5-	0 3	0 2	0 1
4	1 45	1 26-	1 10	0 56	0 43	0 4	0 2	0 0-	*Sub.* 0-	*Sub.* 1
5	1 43	1 25	1 8-	0 54-	0 42	*Subtr.*	*Sub.* 1	*Sub.* 2-	0 2-	0 3
6	1 40-	1 23	1 7	0 53	0 41	0 4	0 4-	0 5	0 5	0 4-
7	1 38-	1 21	1 5-	0 52	0 40	0 8	0 8	0 7-	0 7	0 6
8	1 36	1 19	1 4	0 50-	0 39	0 12	0 11	0 10	0 9	0 8
9	1 33-	1 17	1 2	0 49	0 38	0 16	0 14-	0 13	0 11	0 10
10	1 30-	1 14-	1 0	0 47-	0 36-	0 20	0 18	0 16	0 13-	0 11-
11	1 28	1 12	0 58	0 46	0 35-	0 24	0 21-	0 18-	0 16	0 13-
12	1 25	1 9-	0 56	0 44	0 34	0 27-	0 24-	0 21	0 18	0 14-
13	1 22	1 7	0 54	0 42-	0 32-	0 31-	0 27-	0 24	0 20	0 16
14	1 19	1 4-	0 52	0 41	0 31	0 35	0 31	0 26-	0 22	0 18
15	1 16	1 2	0 50	0 39	0 30	0 39	0 34	0 29	0 24	0 19-
16	1 12-	0 59	0 47-	0 37	0 28-	0 43	0 37	0 31-	0 26	0 21
17	1 9	0 56	0 45	0 35	0 27	0 46-	0 40	0 34	0 28	0 22-
18	1 5-	0 53-	0 43	0 33-	0 25-	0 50	0 43	0 36	0 30	0 24
19	1 2	0 50-	0 40-	0 31-	0 24	0 53-	0 46	0 38-	0 32	0 25-
20	0 58-	0 47-	0 38	0 29-	0 22	0 57	0 48-	0 41	0 33-	0 27
21	0 55	0 44-	0 35-	0 27-	0 20-	1 0-	0 51	0 43	0 35-	0 28-
22	0 51	0 41-	0 33	0 25-	0 19	1 3-	0 54	0 45-	0 37	0 29-
23	0 47-	0 38-	0 30-	0 23	0 17-	0 6-	0 56-	0 47-	0 39	0 31-
24	0 44	0 35	0 28	0 21	0 16	1 9-	0 59	0 49-	0 40-	0 32
25	0 40	0 32	0 25	0 19	0 14	1 12-	1 1-	0 51-	0 42	0 33
26	0 36	0 28-	0 22-	0 17	0 12-	1 15-	1 4	0 53-	0 43-	0 34-
27	0 32	0 25	0 20	0 15	0 11	1 18-	1 6-	0 55	0 45	0 36
28	0 28	0 22	0 17	0 12-	0 9	1 21	1 9	0 57	0 46-	0 37
29	0 24	0 19	0 14	0 10	0 7-	1 23-	1 11	0 59	0 48	0 38
30	0 20	0 15-	0 11-	0 8	0 6	1 26	1 13	1 0-	0 49	0 39

TABVLA PRO EXPEDIENDO CALCVLO ÆQVATIONIS CENTRI LVNÆ.

Medii Lunæ loci ab Apogæo æquato diſtantia.

	Sig. IV. *Subtrahe.*					Sig. V. *Subtrahe.*				
Log.	9 942	9 947	9 952	9 957	9 962	9 942	9 947	9 952	9 957	9 962
Gr.	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
0	1 26	1 13	1 0-	0 49	0 39	1 36-	1 21	1 6-	0 53	0 42
1	1 29	1 15	1 2	0 50	0 40	1 35	1 19-	1 5-	0 52-	0 41
2	1 30-	1 16-	1 3-	0 51	0 41	1 33	1 18	1 4	0 51-	0 40
3	1 32-	1 18-	1 5	0 52	0 42	1 31	1 16	1 2-	0 50-	0 39
4	1 34-	1 20	1 6	0 53-	0 42-	1 28-	1 14	1 1	0 49	0 38
5	1 36-	1 21-	1 7	0 54-	0 43-	1 26-	1 12	0 59-	0 47-	0 37
6	1 38	1 23	1 8-	0 55-	0 44	1 24	1 10	0 57-	0 46	0 36
7	1 39-	1 24-	1 9-	0 56	0 44-	1 21-	1 8	0 56	0 44-	0 35
8	1 41	1 25-	1 10-	0 57	0 45	1 18-	1 6	0 54	0 43	0 34
9	1 42-	1 26-	1 11-	0 57-	0 45-	1 16	1 3-	0 52	0 41-	0 33
10	1 44	1 27-	1 12	0 58	0 46	1 13	1 1	0 50	0 40	0 31-
11	1 45	1 28-	1 13	0 58-	0 46	1 10	0 58-	0 48	0 38-	0 30-
12	1 45-	1 29	1 13-	0 59	0 46-	1 7	0 56	0 46	0 37	0 29
13	1 46	1 29-	1 13-	0 59-	0 46-	1 3-	0 53-	0 43-	0 35	0 27-
14	1 47	1 30	1 14	1 0	0 47	1 0	0 50-	0 41-	0 33	0 26
15	1 47	1 30	1 14-	1 0	0 47-	0 57	0 48	0 39-	0 31-	0 24-
16	1 47-	1 30-	1 14-	1 0	0 47-	0 53-	0 45	0 37	0 29-	0 23
17	1 48	1 30-	1 15	1 0	0 47-	0 50	0 42	0 34-	0 27-	0 21-
18	1 48	1 30-	1 15	1 0	0 47-	0 46-	0 39	0 32	0 25-	0 20
19	1 48	1 30-	1 15	1 0	0 47	0 43	0 36	0 29-	0 23-	0 18-
20	1 47-	1 30	1 14-	1 0	0 47	0 39	0 33	0 27	0 21-	0 17
21	1 47	1 30	1 14	0 59-	0 47	0 35-	0 29-	0 24	0 19-	0 15-
22	1 46-	1 29-	1 13-	0 59	0 46-	0 31-	0 26-	0 21-	0 17	0 13-
23	1 45-	1 29	1 13	0 58-	0 46	0 28	0 23	0 19	0 15	0 12
24	1 44-	1 28	1 12-	0 58	0 45-	0 24	0 20	0 16	0 13	0 10
25	1 43-	1 27	1 12	0 57-	0 45	0 20	0 16-	0 13-	0 11	0 8-
26	1 42-	1 26	1 11	0 57	0 44-	0 16	0 13	0 11	0 9	0 7
27	1 41	1 25	1 10	0 56-	0 44	0 12	0 10	0 8-	0 7	0 5-
28	1 40	1 24	1 9	0 55-	0 43-	0 8	0 7	0 5-	0 4-	0 3-
29	1 38-	1 22	1 8	0 54-	0 43	0 4	0 3-	0 3	0 2	0 2
30	1 36-	1 21	1 6-	0 53-	0 42	0 0	0 0	0 0	0 0	0 0

TABULA VARIATIONIS *ſive* REFLECTIONIS.

Lunæ æquatæ a Sole diſtantia.

Sig.	0. VI.	I. VII.	II. VIII.	
	Adde.	*Adde.*	*Adde.*	
Gr.	′ ″	′ ″	′ ″	
0	0 0	30 27	30 27	30
1	1 14	31 3	29 49	29
2	2 27	31 36-	29 9-	28
3	3 40-	32 7-	28 27	27
4	4 54	32 36	27 43	26
5	6 6-	33 3	26 56-	25
6	7 19	33 27	26 8	24
7	8 30-	33 48	25 18	23
8	9 41-	34 7-	24 26	22
9	10 52	34 24	23 32	21
10	12 2	34 38	22 36	20
11	13 10-	34 50	21 39	19
12	14 18	34 59	20 40	18
13	15 25	35 5-	19 40	17
14	16 30-	35 9	18 38	16
15	17 35	35 10	17 35	15
16	18 38	35 9	16 30-	14
17	19 40	35 5-	15 25	13
18	20 40	34 59	14 18	12
19	21 39	34 50	13 10-	11
20	22 36	34 38	12 2	10
21	23 32	34 24	10 52	9
22	24 26	34 7-	9 41-	8
23	25 18	33 48	8 30-	7
24	26 8	33 27	7 19	6
25	26 56-	33 3	6 6-	5
26	27 43	32 36	4 54	4
27	28 27	32 7-	3 40-	3
28	29 9-	31 36-	2 27	2
29	29 49	31 3	1 14	1
30	30 27	30 27	0 0	0
Sig.	V. XI.	IV. X.	III. IX.	Gr.
	Subtr.	*Subtr.*	*Subtr.*	

LOGARITHMI PRO CORRECTIONE VARIATIONIS.

Anomalia Media Solis.

	Sig. 0.	Sig. I.	Sig. II.	
Gr.	*Logar.*	*Logar.*	*Logar.*	
0	0 0242	0 0211	0 0125	30
2	0 0242	0 0207	0 0118-	28
4	0 0242	0 0203	0 0110-	26
6	0 0241	0 0198-	0 0102-	24
8	0 0240	0 0193-	0 0095	22
10	0 0239	0 0188	0 0087	20
12	0 0237-	0 0182-	0 0079	18
14	0 0235-	0 0177	0 0071	16
16	0 0233-	0 0171	0 0063	14
18	0 0231	0 0165	0 0055	12
20	0 0229	0 0159	0 0046	10
22	0 0226	0 0153	0 0038	8
24	0 0223	0 0146	0 0029-	6
26	0 0219	0 0139	0 0021	4
28	0 0215	0 0132	0 0012-	2
30	0 0211	0 0125	0 0004	0
	Sig. XI.	Sig. X.	Sig. IX.	Gr.
Gr.	Sig. III.	Sig. IV.	Sig. V.	
0	0 0004	9 9880	9 9787-	30
2	9 9995-	9 9872	9 9783	28
4	9 9987	9 9865	9 9779	26
6	9 9978-	9 9858	9 9775	24
8	9 9969	9 9851	9 9772	22
10	9 9961	9 9844	9 9769	20
12	9 9952-	9 9837	9 9766	18
14	9 9944	9 9830	9 9763	16
16	9 9936	9 9824	9 9760-	14
18	9 9928	9 9818	9 9758-	12
20	9 9920	9 9812	9 9757	10
22	9 9912	9 9807	9 9755-	8
24	9 9904	9 9802	9 9754	6
26	9 9896	9 9797	9 9753	4
28	9 9888	9 0792	9 9753	2
30	9 9880	9 9787-	9 9753	0
	Sig. VIII.	Sig. VII.	Sig. VI.	Gr.

TABULA PRO COMPUTO LATITUD

Solis a Nodo medio diſtantia.

	Sig. O. VI.						Sig. I. VII.						Sig. II VIII.						
	Æquat. Nodi Adde.			*Inclinat. Sinus Logarithmicus.*	*Reduct. Maxi.*		*Æquat. Nodi Adde.*			*Inclinat Sinus Logarithmicus.*	*Reduct. Maxi.*		*Æquat. Nodi Adde.*			*Inclinat Sinus Logarithmicus.*	*Reduct Maxi.*		
Gr.	°	'	"		'	"	°	'	"		'	"	°	'	"		'	"	
0	0	0	0	8 96462	7	20	1	16	42	8 95853	7	8	1	18	44	8 94605	6	44	30
1	0	3	3	8 96461			1	18	16	8 95816	7	7	1	17	13	8 94567	6	43	29
2	0	6	6	8 96459			1	19	44	8 95777			1	15	29	8 94531			28
3	0	9	9	8 96456			1	21	6	8 95737	7	6	1	13	43	8 94495	6	42	27
4	0	12	10	8 96451			1	22	23	8 95698	7	5	1	11	53	8 94459			26
5	0	15	12	8 96444			1	23	34	8 95658	7	4	1	9	55	8 94425	6	41	25
6	0	18	12	8 96436			1	24	39	8 95617	7	3	1	7	52	8 94391			24
7	0	21	10	8 96426			1	25	38	8 95576	7	2	1	5	44	8 94359	6	40	23
8	0	24	8	8 96415	7	19	1	26	31	8 95534	7	1	1	3	32	8 94328			22
9	0	27	4	8 96403			1	27	17	8 95492	7	0	1	1	14	8 94298	6	39	21
10	0	29	57	8 96390			1	27	58	8 95450			0	58	51	8 94269	6	38	20
11	0	32	49	8 96375			1	28	32	8 95407	6	59	0	56	24	8 94241	6	37	19
12	0	35	39	8 96358	7	18	1	28	59	8 95363	6	58	0	53	53	8 94214			18
13	0	38	26	8 96340			1	29	21	8 95320	6	57	0	51	17	8 94188	6	36	17
14	0	41	11	8 96321	7	17	1	29	35	8 95277			0	48	38	8 94164			16
15	0	43	53	8 96300			1	29	43	8 95234	6	56	0	45	54	8 94141	6	35	15
16	0	46	31	8 96278			1	29	45	8 95190	6	55	0	43	7	8 94119			14
17	0	49	7	8 96255	7	16	1	29	40	8 95147	6	54	0	40	17	8 94099			13
18	0	51	39	8 96231			1	29	28	8 95104	6	53	0	37	24	8 94080	6	34	12
19	0	54	8	8 96205	7	15	1	29	10	8 95060			0	34	27	8 94062			11
20	0	56	33	8 96178			1	28	46	8 95017	6	52	0	31	28	8 94046			10
21	0	58	54	8 96150	7	14	1	28	14	8 94974	6	51	0	28	26	8 94032			9
22	1	1	11	8 96121			1	27	37	8 94931	6	50	0	25	22	8 94019	6	33	8
23	1	3	24	8 96091	7	13	1	26	52	8 94889	6	49	0	22	16	8 94008			7
24	1	5	32	8 96060	7	12	1	26	1	8 94847	6	48	0	19	9	8 93997			6
25	1	7	36	8 96028			1	25	4	8 94806			0	16	0	8 93988			5
26	1	9	35	8 95995	7	11	1	24	1	8 94764	6	47	0	12	49	8 93981			4
27	1	11	30	8 95960	7	10	1	22	51	8 94724	6	46	0	9	38	8 93976			3
28	1	13	19	8 95925			1	21	35	8 94684			0	6	26	8 93972			2
29	1	15	03	8 95889	7	9	1	20	12	8 94645	6	45	0	3	13	8 93970			1
30	1	16	42	8 95853	7	8	1	18	44	8 94605	6	44	0	0	0	8 93970	6	32	0
	Subtrahe.						*Subtrahe.*						*Subtrahe.*						*Gr.*
	Sig. V. XI.						Sig. IV. X.						Sig. III. IX.						

TABULA PARALLAXIUM LUNÆ HORIZONTALIUM IN SYZYGIIS.

Anom. Lunæ vera.		Eccentricitas Lunæ.						Anom. Lunæ vera.		Eccentricitas Lunæ.					
		,065		,055		,045				,065		,055		,045	
		Parallaxis Lunæ Horiz.								Parallaxis Lunæ Horiz.					
S	°	′	″	′	″	′	″	S	°	′	″	′	″	′	″
0	0	53	34	54	4	54	35	3	0	57	16	57	12	57	9
0	3	53	34	54	4	54	35	3	3	57	28	57	22	57	17
0	6	53	35	54	5	54	35	3	6	57	40	57	32	57	25
0	9	53	36	54	6	54	36	3	9	57	51	57	42	57	33
0	12	53	38	54	8	54	38	3	12	58	3	57	52	57	41
0	15	53	41	54	10	54	40	3	15	58	14	58	1	57	49
0	18	53	44	54	13	54	42	3	18	58	25	58	11	57	57
0	21	53	48	54	16	54	45	3	21	58	36	58	20	58	4
0	24	53	52	54	20	54	48	3	24	58	47	58	29	58	12
0	27	53	57	54	24	54	51	3	27	58	58	58	38	58	19
1	0	54	3	54	29	54	55	4	0	59	8	58	47	58	26
1	3	54	9	54	34	54	59	4	3	59	18	58	55	58	33
1	6	54	16	54	40	55	4	4	6	59	28	59	3	58	40
1	9	54	23	54	46	55	9	4	9	59	37	59	11	58	46
1	12	54	30	54	52	55	14	4	12	59	46	59	19	58	52
1	15	54	38	54	59	55	20	4	15	59	54	59	26	58	58
1	18	54	47	55	6	55	26	4	18	60	2	59	33	59	3
1	21	54	56	55	13	55	32	4	21	60	10	59	39	59	9
1	24	55	5	55	21	55	38	4	24	60	17	59	45	59	14
1	27	55	15	55	30	55	45	4	27	60	24	59	51	59	18
2	0	55	25	55	38	55	52	5	0	60	30	59	56	59	23
2	3	55	35	55	47	55	59	5	3	60	35	60	1	59	26
2	6	55	46	55	56	56	6	5	6	60	40	60	5	59	30
2	9	55	56	56	5	56	14	5	9	60	45	60	9	59	33
2	12	56	7	56	14	56	21	5	12	60	49	60	12	59	36
2	15	56	19	56	23	56	29	5	15	60	52	60	15	59	38
2	18	56	30	56	33	56	37	5	18	60	55	60	17	59	40
2	21	56	41	56	43	56	45	5	21	60	57	60	19	59	41
2	24	56	53	56	53	56	53	5	24	60	59	60	20	59	42
2	27	57	5	57	3	57	1	5	27	61	0	60	21	59	43
3	0	57	16	57	12	57	9	6	0	61	0	60	21	59	43

Logarithmi pro Parallaxi extra Syzygias.

Lunæ à Sole vel Oppoſito diſtan.		*Logarithmi Logiſt. addendi.*
S	°	*Log.*
0	0	0 0
0	3	0, 2
0	6	0, 7
0	9	1, 5
0	12	2, 7
0	15	4, 2
0	18	6, 0
0	21	8, 1
0	24	10, 4
0	27	13, 0
1	0	15, 7
1	3	18, 6
1	6	21, 7
1	9	24, 7
1	12	28, 1
1	15	31, 4
1	18	34, 6
1	21	37, 8
1	24	41, 0
1	27	44, 1
2	0	47, 0
2	3	49, 7
2	6	52, 2
2	9	54, 5
2	12	56, 6
2	15	58, 3
2	18	59, 8
2	21	61, 0
2	24	61, 8
2	27	62, 3
3	0	62, 5.

TABULA MOTUUM HORARIORUM, DIAMETRORUM ET PARALAXIUM SOLIS ET LUNÆ, IN ECLIPSIBUS.

Anom. med. Solis.	☉ Mot. H. ver.	Diam. Solis.	Anom. med. Solis.	Argum. Ann.	☽ Mot. Hor. ver.	☽ Diam. Horiz.	☽ Paral. Horiz.	Argum. Ann.	Diſt. ☉ & ☽ à vert.	Pa-ral. ☉	Aug. Diam Lunæ Apog.	Aug. Diam Lunæ Perig.
s °	′ ″	′ ″	° s	s °	′ ″	′ ″	′ ″	° s	Gr.	″	″	″
0 0	2 23	31 38	0 XII	0. 0	29 33	29 25	53 28	0 XII	0	0	29	36
5	2 23	31 38	25	5	29 34	29 25	53 29	25	3	1	28	36
10	2 23	31 38	20	10	29 36	29 26	53 31	20	6	1	28	36
15	2 23	31 39	15	15	29 39	29 28	53 35	15	9	2	28	36
20	2 23	31 40	10	20	29 45	29 30	53 41	10	12	3	27	35
25	2 23	31 41	5	25	29 53	29 34	53 48	5	15	3	27	35
I. 0	2 24	31 42	0 XI	I. 0	30 1	29 40	53 57	0 XI.	18	4	27	34
5	2 24	31 43	25	5	30 11	29 46	54 7	25	21	4	26	34
10	2 24	31 45	20	10	30 22	29 51	54 18	20	24	5	26	33
15	2 24	31 47	15	15	30 36	29 58	54 32	15	27	6	25	32
20	2 25	31 49	10	20	30 50	30 5	54 45	10	30	6	24	31
25	2 25	31 51	5	25	31 6	30 14	55 0	5	33	7	23	30
II. 0	2 25	31 53	0 X.	II. 0	31 23	30 23	55 16	0 X.	36	7	23	29
5	2 26	31 56	25	5	31 42	30 32	55 33	25	39	8	22	28
10	2 26	31 59	20	10	32 1	30 42	55 51	20	42	8	21	27
15	2 26	32 1	15	15	32 23	30 52	56 10	15	45	9	20	25
20	2 27	32 4	10	20	32 45	31 3	56 30	10	48	9	19	24
25	2 27	32 7	5	25	33 8	31 14	56 49	5	51	9	18	23
III. 0	2 28	32 10	0 IX	III. 0	33 32	31 25	57 9	0 IX	54	10	16	21
5	2 28	32 13	25	5	33 56	31 36	57 29	25	56	10	16	20
10	2 28	32 15	20	10	34 21	31 47	57 49	20	58	10	15	19
15	2 29	32 18	15	15	34 45	31 58	58 9	15	60	10	14	18
20	2 29	32 21	10	20	35 8	32 9	58 28	10	62	11	13	17
25	2 30	32 23	5	25	35 31	32 20	58 47	5	64	11	12	16
IV. 0	2 30	32 26	0 VIII	IV. 0	35 54	32 30	59 5	0 VIII	66	11	11	15
5	2 31	32 29	25	5	36 14	32 39	59 23	25	68	11	10	13
10	2 31	32 31	20	10	36 34	32 48	59 40	20	70	11	10	12
15	2 31	32 33	15	15	36 53	32 57	59 55	15	72	11	9	11
20	2 32	32 35	10	20	37 10	33 5	60 10	10	74	12	8	10
25	2 32	32 37	5	25	37 24	33 12	60 23	5	76	12	7	9
V. 0	2 32	32 39	0 VII	V. 0	37 39	33 18	60 34	0 VII	78	12	6	7
5	2 32	32 40	25	5	37 50	33 24	60 44	25	80	12	5	6
10	2 33	32 41	20	10	38 0	33 28	60 52	20	82	12	4	5
15	2 33	32 42	15	15	38 6	33 31	60 58	15	84	12	3	4
20	2 33	32 43	10	20	38 14	33 34	61 3	10	86	12	2	2
25	2 33	32 43	5	25	38 17	33 36	61 6	5	88	12	1	1
VI. 0	2 33	32 43	0 VI	VI. 0	38 18	33 36	61 7	0 VI,	90	12	0	0

In Oppoſitionibus addantur
VI *Signa Argumento Annuo.*

TABULA REFRACTIONUM SECUNDUM DISTANTIAS à VERTICE.

Diſt. App. à Vertice	Refractio.		Diſt. App. à Vertice	Refractio.		Diſt. App. à Vertice		Refractio.	
Gr.	′	″	Gr.	′	″	Gr.	m.	′	″
0	0	0	35	0	38	70	0	2	26
1	0	1	36	0	39	71	0	2	34
2	0	2	37	0	40	72	0	2	43
3	0	3	38	0	42	73	0	2	53
4	0	4	39	0	44	74	0	3	4
5	0	5	40	0	45	75	0	3	17
6	0	6	41	0	47	76	0	3	31
7	0	7	42	0	48	77	0	3	47
8	0	8	43	0	50	78	0	4	5
9	0	9	44	0	52	79	0	4	27
10	0	10	45	0	54	80	0	4	52
11	0	11	46	0	56	80	30	5	6
12	0	12	47	0	58	81	0	5	22
13	0	13	48	1	0	81	30	5	40
14	0	14	49	1	2	82	0	6	0
15	0	15	50	1	4	82	30	6	22
16	0	16	51	1	6	83	0	6	47
17	0	17	52	1	8	83	30	7	14
18	0	18	53	1	11	84	0	7	45
19	0	19	54	1	13	84	30	8	21
20	0	20	55	1	16	85	0	9	2
21	0	21	56	1	19	85	30	9	50
22	0	22	57	1	22	86	0	10	48
23	0	23	58	1	25	86	30	11	57
24	0	24	59	1	28	87	0	13	20
25	0	25	60	1	32	87	30	15	2
26	0	26	61	1	36	88	0	17	8
27	0	27	62	1	40	88	15	18	22
28	0	28	63	1	44	88	30	19	46
29	0	30	64	1	49	88	45	21	20
30	0	31	65	1	54	89	0	23	7
31	0	32	66	1	59	89	15	25	11
32	0	34	67	2	5	89	30	27	35
33	0	35	68	2	11	89	45	30	24
34	0	36	69	2	18	90	0	33	45

TABULA ÆQUATIONUM LUNÆ IN SYZYGIIS.

Argumentum Annuum.

Sol ab Apog. Lunæ Gr.	Sig. 0. Subtr.			Sig. I. Subtr.			Sig. II. Subtr.			Sig. III. Subtr.			Sig. IV. Subtr.			Sig. V. Subtr.			
	°	′	″	°	′	″	°	′	″	°	′	″	°	′	″	°	′	″	
0	0	0	0	2	38	53	4	27	45	4	57	46	4	8	20	2	19	27	30
1	0	5	36	2	43	33	4	30	6	4	57	20	4	5	31	2	15	7	29
2	0	11	12	2	48	9	4	32	21	4	56	49	4	2	38	2	10	45	28
3	0	16	47	2	52	42	4	34	31	4	56	12	3	59	41	2	6	22	27
4	0	22	23	2	57	11	4	36	35	4	55	29	3	56	39	2	1	57	26
5	0	27	58	3	1	37	4	38	34	4	54	42	3	53	35	1	57	31	25
6	0	33	33	3	5	59	4	40	27	4	53	50	3	50	28	1	53	2	24
7	0	39	6	3	10	16	4	42	15	4	52	52	3	47	16	1	48	31	23
8	0	44	38	3	14	30	4	43	58	4	51	48	3	44	1	1	43	59	22
9	0	50	9	3	18	40	4	45	35	4	50	40	3	40	42	1	39	26	21
10	0	55	40	3	22	45	4	47	5	4	49	26	3	37	18	1	34	52	20
11	1	1	9	3	26	45	4	48	30	4	48	7	3	33	52	1	30	16	19
12	1	6	37	3	30	41	4	49	50	4	46	44	3	30	22	1	25	38	18
13	1	12	4	3	34	33	4	51	5	4	45	16	3	26	49	1	20	58	17
14	1	17	30	3	38	20	4	52	13	4	43	42	3	23	14	1	16	18	16
15	1	22	53	3	42	2	4	53	15	4	42	4	3	19	36	1	11	37	15
16	1	28	13	3	45	40	4	54	13	4	40	21	3	15	54	1	6	55	14
17	1	33	31	3	49	14	4	55	5	4	38	33	3	12	10	1	2	13	13
18	1	38	48	3	52	43	4	55	51	4	36	41	3	8	22	0	57	30	12
19	1	44	3	3	56	6	4	56	32	4	34	44	3	4	31	0	52	45	11
20	1	49	16	3	59	24	4	57	7	4	32	42	3	0	38	0	48	0	10
21	1	54	27	4	2	37	4	57	36	4	30	35	2	56	42	0	43	14	9
22	1	59	36	4	5	46	4	57	59	4	28	24	2	52	44	0	38	28	8
23	2	4	41	4	8	49	4	58	16	4	26	9	2	48	43	0	33	41	7
24	2	9	43	4	11	47	4	58	29	4	23	50	2	44	39	0	28	52	6
25	2	14	43	4	14	40	4	58	35	4	21	25	2	40	32	0	24	4	5
26	2	19	41	4	17	27	4	58	36	4	18	56	2	36	24	0	19	16	4
27	2	24	35	4	20	8	4	58	31	4	16	23	2	32	14	0	14	27	3
28	2	29	24	4	22	46	4	58	22	4	13	46	2	28	1	0	9	38	2
29	2	34	10	4	25	19	4	58	7	4	11	5	2	23	45	0	4	49	1
30	2	38	53	4	27	45	4	57	46	4	8	20	2	19	27	0	0	0	0
	Sig. XI. Adde.			Sig. X. Adde.			Sig. IX. Adde.			Sig. VIII. Adde.			Sig. VII. Adde.			Sig. VI. Adde.			Gr.

TABULA LATITUDINARIA LUNÆ IN SYZYGIIS.

Solis a Nodo medio diſtantia.

Argument. Latitudinis.	Sig. 0. *Bor.* Sig. 6. *Auſt.* *Latitudo.*	*Subtr.* *Subtr.* *Reduct.*	*Inclinatio viæ Lunæ ad Eclipticam.*	Sig. 1. *Bor.* Sig. 7. *Auſt.* *Latitudo.*	*Subtr.* *Subtr.* *Reduct.*	Sig. 2. *Bor.* Sig. 8. *Auſt.* *Latitudo.*	*Subtr.* *Subtr.* *Reduct.*	
Gr.	° ′ ″	′ ″	° ′ ″	° ′ ″	′ ″	° ′ ″	′ ″	
0	0 0 0	0 0	5 17 20	2 30 12	6 1	4 19 39	5 59	30
1	0 5 15	0 14	5 17 17	2 34 42	6 8	4 22 13	5 51	29
2	0 10 30	0 29	5 17 8	2 39 9	6 14	4 24 42	5 43	28
3	0 15 44	0 43	5 16 54	2 43 34	6 20	4 27 6	5 35	27
4	0 20 59	0 58	5 16 33	2 47 56	6 26	4 29 25	5 26	26
5	0 26 13	1 12	5 16 6	2 52 15	6 31	4 31 40	5 17	25
6	0 31 26	1 26	5 15 33	2 56 30	6 36	4 33 49	5 8	24
7	0 36 39	1 41	5 14 55	3 0 42	6 40	4 35 53	4 58	23
8	0 41 51	1 55	5 14 11	3 4 51	6 43	4 37 52	4 48	22
9	0 47 2	2 9	5 13 22	3 8 56	6 46	4 39 47	4 37	21
10	0 52 13	2 22	5 12 27	3 12 58	6 49	4 41 37	4 26	20
11	0 57 23	2 36	5 11 26	3 16 56	6 52	4 43 21	4 15	19
12	1 2 31	2 49	5 10 19	3 20 51	6 54	4 45 0	4 3	18
13	1 7 38	3 3	5 9 6	3 24 42	6 55	4 46 34	3 51	17
14	1 12 44	3 16	5 7 47	3 28 29	6 56	4 48 3	3 39	16
15	1 17 49	3 29	5 6 22	3 32 12	6 56	4 49 26	3 27	15
16	1 22 52	3 41	5 4 52	3 35 51	6 55	4 50 44	3 14	14
17	1 27 54	3 53	5 3 16	3 39 26	6 54	4 51 57	3 1	13
18	1 32 54	4 5	5 1 35	3 42 57	6 53	4 53 4	2 48	12
19	1 37 52	4 17	4 59 49	3 46 24	6 51	4 54 6	2 35	11
20	1 42 49	4 28	4 57 56	3 49 48	6 49	4 55 3	2 21	10
21	1 47 44	4 39	4 55 58	3 53 7	6 46	4 55 55	2 8	9
22	1 52 37	4 50	4 53 55	3 56 22	6 43	4 56 42	1 54	8
23	1 57 27	5 0	4 51 47	3 59 33	6 39	4 57 23	1 40	7
24	2 2 15	5 10	4 49 33	4 2 39	6 35	4 57 58	1 26	6
25	2 7 00	5 20	4 47 14	4 5 40	6 30	4 58 27	1 12	5
26	2 11 43	5 29	4 44 50	4 8 36	6 25	4 58 51	0 58	4
27	2 16 24	5 38	4 42 20	4 11 28	6 19	4 59 10	0 43	3
28	2 21 2	5 46	4 39 45	4 14 16	6 13	4 59 24	0 29	2
29	2 25 38	5 54	4 37 5	4 17 0	6 6	4 59 32	0 14	1
30	2 30 12	6 1	4 34 19	4 19 39	5 59	4 59 35	0 0	0
	Sig. 11. *Auſt.* Sig. 5. *Bor.*	*Adde.* *Adde.*		Sig. 10. *Auſt.* Sig. 4. *Bor.*	*Adde.* *Adde.*	Sig 9. *Auſt* Sig. 3. *Bor.*	*Adde.* *Adde*	*Gr.*

TABULA MOTUUM HORARIORUM, DIAMETRORUM ET PARALLAXIUM SOLIS ET LUNÆ, IN ECLIPSIBUS

Anom. med. Solis.	*Hor.* ☉ *ver.*	*Diam. Solis.*	*Anom. med. Solis.*	*Argum. Ann.*	☽ *Mot. Hor. Ver.*	☽ *Diam. Horiz.*	☽ *Parall. Horiz.*	*Argum. Ann.*	*Alt.* ☉ & ☽.	*Parallax.* ☉.	*Aug. Diam Lunæ Apog*	*Aug. Diam Lunæ Perig.*
s °	' "	' "	° s	s °	' "	' "	' "	° s	°	"	"	"
O. 0	2 23	31 38	0 XII.	O. 0	29 33	29 25	53 28	0 XII.	0	12	0	0
5	2 23	31 38	25	5	29 34	29 25	53 29	25	2	12	1	1
10	2 23	31 38	20	10	29 36	29 26	53 31	20	4	12	2	2
15	2 23	31 39	15	15	29 39	29 28	53 35	15	6	12	3	4
20	2 23	31 40	10	20	29 45	29 30	53 41	10	8	12	4	5
25	2 23	31 41	5	25	29 53	29 34	53 48	5	10	12	5	6
I. 0	2 24	31 42	0 XI.	I. 0	30 1	29 40	53 57	0 XI.	12	12	6	7
5	2 24	31 43	25	5	30 11	29 46	54 7	25	14	12	7	9
10	2 24	31 45	20	10	30 22	29 51	54 18	20	16	12	8	10
15	2 24	31 47	15	15	30 36	29 58	54 32	15	18	12	9	11
20	2 25	31 49	10	20	30 50	30 5	54 45	10	20	12	10	12
25	2 25	31 51	5	25	31 6	30 14	55 0	5	22	12	10	13
II. 0	2 25	31 53	0 X.	II. 0	31 23	30 23	55 16	0 X.	24	11	11	15
5	2 26	31 56	25	5	31 42	30 32	55 33	25	26	11	12	16
10	2 26	31 59	20	10	32 1	30 42	55 51	20	28	11	13	17
15	2 26	32 1	15	15	32 23	30 52	56 10	15	30	11	14	18
20	2 27	32 4	10	20	32 45	31 3	56 30	10	32	10	15	19
25	2 27	32 7	5	25	33 8	31 14	56 49	5	34	10	16	20
III. 0	2 28	32 10	0 IX	III. 0	33 32	31 25	57 9	0 IX.	36	10	16	21
5	2 28	32 13	25	5	33 56	31 36	57 29	25	39	10	18	23
10	2 28	32 15	20	10	34 21	31 47	57 49	20	42	9	19	24
15	2 29	32 18	15	15	34 45	31 58	58 9	15	45	9	20	25
20	2 29	32 21	10	20	35 8	32 9	58 28	10	48	8	21	27
25	2 30	32 23	5	25	35 31	32 20	58 47	5	51	8	22	28
IV. 0	2 30	32 26	0 VIII	IV. 0	35 54	32 30	59 5	0 VIII	54	7	23	29
5	2 31	32 29	25	5	36 14	32 39	59 23	25	57	7	23	30
10	2 31	32 31	20	10	36 34	32 48	59 40	20	60	6	24	31
15	2 31	32 33	15	15	36 53	32 57	59 55	15	63	6	25	32
20	2 32	32 35	10	20	37 10	33 5	60 10	10	66	5	26	33
25	2 32	32 37	5	25	37 24	33 12	60 23	5	69	4	26	34
V. 0	2 32	32 39	0 VII.	V. 0	37 39	33 18	60 34	0 VII.	72	4	27	34
5	2 32	32 40	25	5	37 50	33 24	60 44	25	75	3	27	35
10	2 33	32 41	20	10	38 0	33 28	60 52	20	78	3	27	35
15	2 33	32 42	15	15	38 6	33 31	60 58	15	81	2	28	36
20	2 33	32 43	10	20	38 14	33 34	61 3	10	84	1	28	36
25	2 33	32 43	5	25	38 17	33 36	61 6	5	87	1	28	36
VI. 0	2 33	32 43	0 VI.	VI. 0	38 18	33 36	61 7	0 VI.	90	0	29	36

ECLIPSIVM SOLARIVM PERIODVS PLINIANA CVRRENTIS SECVLI XIIX^{vi} PRIMA.

Anno Chriſti Juli.	Med Eclipſis Solis Temp. Æquat. Londini.				Anomalia media Solis.			Argumentum Annuum.			Lat. Lunæ à Sole.		Plaga Lunæ.
		D.	H.	′	S.	°.	′	S.	°.	′	′	″	
1701	Jan.	27	11	6	7	10	8	11	7	27	35	20	Bor. aſc.
	Jul.	23	21	30	1	5	1	4	10	37	26	22	Auſt. deſc.
1702	Jan.	16	13	42	6	29	9	9	16	47	3	35	Auſt. aſc.
	Jul.	13	9	39	0	24	25	2	20	47	18	14	Bor. deſc.
1703	Jan.	5	23	27	6	18	27	7	26	20	43	50	Auſt. aſc.
	Jul.	2	14	36½	0	13	32	1	0	44	61	0	Bor. deſc.
	Nov.	27	3	44	5	8	57	5	9	30	79	13	Bor. aſc.
	Dec.	26	14	15	6	7	58	6	6	3	84	20	Auſt. aſc.
1704	Maii	22	1	7	11	3	18	10	15	27	51	33	Auſt. deſc.
	Nov.	15	17	38	4	28	25	3	19	13	38	37	Bor. aſc.
1705	Maii	11	7	55	10	22	28	8	25	26	8	26	Auſt. deſc.
	Nov.	5	1	20	4	17	38	1	28	45	1	29	Auſt. aſc.
1706	Apr.	30	21	34	10	11	56	7	5	37½	36	12	Bor. deſc.
	Octob.	25	2	19	4	6	35	0	8	3	40	21	Aaſt. aſc.
1707	Apr.	20	14	19	10	1	32	5	16	27	80	24	Bor. deſc.
	Sept.	14	11	4	2	26	17	9	20	40	81	33	Bor. aſc.
	Octob.	14	2	16	3	25	30	10	17	23	78	36	Auſt. aſc.
1708	Mart.	10	18	53	8	22	2	3	0	27	33	21	Auſt. deſc.
	Sept.	2	21	0	2	15	35	8	1	14	39	43	Bor. aſc.
1709	Feb.	28	0	17	8	11	10	1	10	2	7	26	Bor. deſc.
	Aug.	23	12	36	2	5	8	6	11	23	4	30	Auſt. aſc.
1710	Feb.	17	0	14	8	0	4	11	19	24	46	31	Bor. deſc.
	Aug.	13	5	16	1	24	43	4	21	37	49	15	Auſt. aſc.
1711	Feb.	6	1	38	7	19	1	9	28	45	84	45	Bor. deſc.
	Julii	4	7	20	0	15	7	2	6	42	61	10	Bor. aſc.
	Dec.	27	22	1	6	9	11½	7	11	46	38	58	Auſt. deſc.
1712	Jun.	22	10	34½	0	4	10	0	16	36	18	43	Bor. aſc.
	Dec.	16	13	27	5	28	44	5	21	31	2	35	Bor. deſc.
1713	Jun.	11	11	18	11	23	6	10	26	24	23	40	Auſt. aſc.
	Dec.	6	4	2	5	18	14	4	1	14	43	49	Bor. deſc.
1714	Maii	31	16	44	11	12	13	9	6	23	66	25	Auſt. aſc.
	Nov.	25	13	28	5	7	31	2	10	46	83	8	Bor. deſc.
1715	Apr.	21	21	35½	10	2	44	6	21	33	43	25	Bor. aſc.
	Octob.	15	20	55	3	27	10	11	23	28	42	37	Auſt. deſc.
1716	Apr.	10	14	27	9	22	20	5	1	46	1	19	Auſt. aſc.
	Octob.	3	22	6	3	16	7	10	2	53½	3	2	Auſt. deſc.
1717	Mart.	31	4	35	9	11	49	3	11	51½	45	5	Auſt. aſc.
	Sept.	23	6	21	3	5	21	8	12	37	38	30	Bor. deſc
1718	Feb.	18	19	30	8	1	46	0	25	31	74	30	Bor. aſc.
	Mart.	20	12	5	9	1	1½	1	21	39	86	7	Auſt. aſc.
	Sept.	12	20	38	2	24	50	6	22	38	81	0	Bor. deſc.

ECLIPSIUM LUNARIUM PERIODUS PLINIANA, CURRENTIS SECULI XIIX$^{\text{vi}}$ PRIMA.

Anno Christi Jul.	Med. Eclipſis Lunæ Temp. Æquat. Londini.				Anomalia media Solis.			Argumentum Annuum.			Lat. Lunæ à Sole.		Plaga Lunæ.
		D.	H.	′	S.	°.	′	S.	°.	′	′	″	
1701	*Feb.*	11	11	29	7	24	56	11	20	51½	47	55	*Bor. deſc.*
	Aug.	7	1	32	1	18	59	4	22	42	48	24	*Auſt. aſc.*
1702	*Dec.*	22	18	59	6	4	28	7	13	32	35	43	*Auſt. deſc.*
1703	*Jun.*	17	13	10	11	28	41	0	17	58	17	43	*Bor. aſc.*
	Dec.	11	18	30	5	23	21	5	22	41	2	1	*Bor. deſc.*
1704	*Jun.*	6	6	24	11	18	17	10	28	22	28	14	*Auſt. aſc.*
	Nov.	29	19	10	5	12	17	4	1	53	40	3	*Bor. deſc.*
1706	*Apr.*	16	13	33	9	27	49	6	23	19	40	10	*Bor. aſc.*
	Octob.	10	6	56	3	21	59	11	24	55	41	17	*Auſt. deſc.*
1707	*Apr.*	5	13	38½	9	16	43	5	2	56	0	52	*Auſt. aſc.*
	Sept.	29	22	25	3	11	32	10	4	53	1	41	*Bor. deſc.*
1708	*Mart.*	24	17	38	9	5	47	3	12	37	42	13	*Auſt. aſc.*
	Sept.	18	8	59	3	0	52	8	14	43	43	52	*Bor. deſc.*
1710	*Feb.*	2	10	49½	7	15	43	11	6	25½	34	0	*Bor. aſc.*
	Jul.	28	22	0	1	9	38	4	8	31½	31	42	*Auſt. deſc.*
1711	*Jan.*	23	0	32½	7	5	11	9	16	11	7	36	*Auſt. aſc.*
	Jul.	18	5	52	0	28	52	2	18	32	11	48	*Bor. deſc.*
1712	*Jan.*	12	7	47	6	24	23	7	25	40	47	21	*Auſt. aſc.*
	Jul.	6	20	19½	0	18	21½	0	28	49	56	40	*Bor. deſc.*
1713	*Maii*	28	6	30	11	9	6	10	14	22	50	45	*Auſt. deſc.*
	Nov.	20	15	16	5	2	55½	3	17	15	43	10	*Bor. aſc.*
1714	*Maii*	17	19	5	10	28	31	8	24	34	6	14	*Auſt. deſc.*
	Nov.	10	1	4	4	22	14	1	26	49½	2	42	*Bor. aſc.*
1715	*Maii*	7	0	31	10	17	38½	7	4	29	36	41	*Bor. deſc.*
	Octob.	30	16	0	4	11	45	0	6	38	39	13	*Auſt. aſc.*
1717	*Mart.*	15	15	15	8	26	29	2	28	18	38	57	*Auſt. deſc.*
	Sept.	9	5	56	2	21	32	8	0	23	37	25	*Bor. aſc.*
1718	*Mart.*	5	3	58	8	15	55	1	8	12	3	41	*Bor. deſc.*
	Aug.	29	7	52	2	10	31	6	10	1	3	39	*Auſt. aſc.*

In hac itaq; Eclipſium Periodo habentur XXIX Eclipſes Lunares & XLI Solares, aliaſq; quinq; quas, ne inutiliter ultra terminos Paginæ noſtræ excreſceret earum Catalogus, conſulto omiſimus. Quatuor autem obtingunt in extremis tantum partibus Terræ, juxta Polum Auſtrinum, ac ubi maximæ non niſi ad paucos Digitos aſſurgunt, atq; inſuper poſt aliquot Periodos, deſcendente Luna in Auſtrum, Penumbra ejus Terræ diſcum deferet. Fiunt vero in Noviluniis *Martii* 1707, *Januarii* 1711, *Octobris* 1714, & *Auguſti* 1718. Quinta *Maii* 2$^{\text{do}}$ 1714, unius tantum erat Digiti prope Polum Boreum, ita ut Novilunium *Maii* 1732 non erit Eclipticum.

TABVLA ÆQVATIONIS INTERVALLI ECLIPSIVM POST PERIODVM PLINIANAM.

Anom. med. Solis.	*Minut. Temp. Subtr.*		*Diff. Lat.*		*Anom. med. Solis.*	*Minut. Temp. Adde.*		*Diff Lat.*		*Argument. Ann.*	*Minut. Temp. Subtr.*		*Argument. Ann.*	*Minut. Temp. Adde.*	
s °	′	″	′	″	s °	′	″	′	″	s °	′	″	s °	′	″
O 0	45	2	4	27	VI. 0	46	54	0	23	O. 0	29	7	VI. 0	25	5
5	44	30	4	26	5	46	19	0	24	5	29	5	5	25	3
10	43	44	4	24	10	45	22	0	26	10	28	44	10	24	50
15	42	36	4	21	15	44	2	0	29	15	28	12	15	24	30
20	41	9	4	16	20	42	27	0	34	20	27	18	20	24	7
25	39	25	4	11	25	40	26	0	39	25	26	12	25	23	30
I. 0	37	23	4	6	VII 0	37	59	0	46	I. 0	24	47	VII 0	22	41
5	35	4	4	0	5	35	22	0	53	5	23	19	5	21	42
10	32	30	3	53	10	32	28	1	0	10	21	38	10	20	38
15	29	41	3	45	15	29	18	1	8	15	19	40	15	19	27
20	26	37	3	37	20	25	55	1	17	20	17	36	20	18	10
25	23	21	3	28	25	22	24	1	26	25	15	25	25	16	35
II. 0	19	55	3	19	VIII 0	18	40	1	36	II. 0	13	11	VIII 0	15	0
5	16	20	3	9	5	14	50	1	46	5	10	48	5	13	15
10	12	32	2	59	10	10	53	1	57	10	8	21	10	11	21
15	8	43	2	49	15	6	55	2	7	15	5	53	15	9	19
20	4	48	2	38	20	+ 2	51	2	18	20	3	25	20	7	12
25	— 0	45	2	28	25	— 1	11	2	29	25	— 1	0	25	5	0
III. 0	+ 3	18	2	17	IX. 0	5	13	2	40	III. 0	+ 1	20	IX. 0	2	42
5	7	19	2	7	5	9	7	2	50	5	3	42	5	+ 0	22
10	11	20	1	56	10	12	58	3	0	10	5	59	10	— 2	0
15	15	13	1	46	15	16	42	3	10	15	8	6	15	4	31
20	19	4	1	36	20	20	18	3	20	20	10	10	20	6	57
25	22	46	1	26	25	23	46	3	29	25	12	8	25	9	23
IV. 0	26	17	1	16	X. 0	26	58	3	38	IV. 0	13	59	X. 0	11	45
5	29	39	1	7	5	29	57	3	46	5	15	44	5	14	4
10	32	47	0	59	10	32	48	3	54	10	17	18	10	16	22
15	35	39	0	52	15	35	21	4	0	15	18	40	15	18	33
20	38	18	0	45	20	37	38	4	6	20	20	0	20	20	30
25	40	40	0	39	25	39	35	4	12	25	21	10	25	22	21
V. 0	42	37	0	34	XI. 0	41	17	4	17	V. 0	22	11	XI. 0	23	59
5	44	11	0	30	5	42	42	4	21	5	22	57	5	25	29
10	45	30	0	26	10	43	50	4	24	10	23	41	10	26	45
15	46	25	0	24	15	44	35	4	26	15	24	19	15	27	36
20	46	58	0	23	20	45	2	4	27	20	24	39	20	28	27
25	- 47	7	0	23	25	45	13	4	28	25	24	59	25	28	54
VI. 0	+46	54	0	23	XII 0	—45	2	4	27	VI. 0	+25	5	XII 0	—29	7

EPOCHÆ MEDIORUM MOTUUM MERCURII.

Annis Julianis ineuntibus.	*Mercurius ab Æquinoct.*	*Aph.* ☿ ♐ 12°	*Nod.* ☿ ♉ 14°	*Annis Julianis ineuntibus.*	*Mercurius ab Æquinoct.*	*Aphel.* ☿ ♐ 12°	*Nod.* ☿ ♉ 14°
	s ° ′ ″	′ ″	′ ″		s ° ′ ″	° ′ ″	° ′ ″
1661	3 17 18 47	9 15	14 50	1696	7 10 9 17	39 54	44 0
62	5 11 1 49	10 7	15 40	97	9 7 57 51	40 47	44 50
63	7 4 44 51	11 0	16 30	98	11 1 40 53	41 40	45 40
64	8 28 27 53	11 52	17 20	99	0 25 23 55	42 32	46 30
1665	10 26 16 27	12 45	18 10	1700	2 19 6 57	43 25	47 20
1666	0 19 59 29	13 37	19 0	1701	4 16 55 32	44 18	48 10
67	2 13 42 31	14 30	19 50	2	6 10 38 34	45 10	49 0
68	4 7 25 33	15 22	20 40	3	8 4 21 36	46 3	49 50
69	6 5 14 8	16 15	21 30	4	9 28 4 38	46 55	50 40
1670	7 28 57 10	17 8	22 20	1705	11 25 53 12	47 48	51 30
1671	9 22 40 12	18 0	23 10	1706	1 19 36 14	48 40	52 20
72	11 16 23 14	18 53	24 0	7	3 13 19 16	49 33	53 10
73	1 14 11 49	19 46	24 50	8	5 7 2 18	50 25	54 0
74	3 7 54 51	20 38	25 40	9	7 4 50 53	51 18	54 50
1675	5 1 37 53	21 31	26 30	1710	8 28 33 55	52 11	55 40
1676	6 25 20 55	22 23	27 20	1711	10 22 16 57	53 3	56 30
77	8 23 9 29	23 16	28 10	12	0 15 59 59	53 56	57 20
78	10 16 52 31	24 8	29 0	13	2 13 48 33	54 49	58 10
79	0 10 35 33	25 1	29 50	14	4 7 31 35	55 41	59 0
1680	2 4 18 35	25 53	30 40	1715	6 1 14 37	56 34	59 50
1681	4 2 7 9	26 46	31 30	1716	7 24 57 40	57 26	15 0 40
82	5 25 50 11	27 38	32 20	17	9 22 46 14	58 19	1 30
83	7 19 33 13	28 31	33 10	18	11 16 29 16	59 11	2 20
84	9 13 16 15	29 23	34 0	19	1 10 12 18	13 0 4	3 10
1685	11 11 4 50	30 16	34 50	1720	3 3 55 20	0 56	4 0
1686	1 4 47 52	31 9	35 40	1721	5 1 43 55	1 49	4 50
87	2 28 30 54	32 2	36 30	22	6 25 26 57	2 41	5 40
88	4 22 13 56	32 54	37 20	23	8 19 9 59	3 34	6 30
89	6 20 2 30	33 47	38 10	24	10 12 53 1	4 26	7 20
1690	8 13 45 32	34 39	39 0	1725	0 10 41 35	5 19	8 10
1691	10 7 28 34	35 32	39 50	1726	2 4 24 37	6 12	9 0
92	0 1 11 36	36 24	40 40	27	3 28 7 39	7 5	9 50
93	1 29 0 11	37 17	41 30	28	5 21 50 41	7 57	10 40
94	3 22 43 13	38 9	42 20	29	7 19 39 15	8 50	11 30
1695	5 16 26 15	39 2	43 10	1730	9 13 22 17	9 42	12 20

EPOCHÆ MEDIORUM MOTUUM MERCURII.

Annis Julianis ineuntibus.	*Mercurius ab Æquinoct.*	*Aph.* ☿ ♐ 12°	*Nod.* ☿ ♉ 14°	*Annis Julianis ineuntibus.*	*Mercurius ab Æquinoct.*	*Aphel.* ☿ ♐ 13°	*Nod.* ☿ ♉ 15°
	s ° ′ ″	′ ″	′ ″		s ° ′ ″	° ′ ″	° ′ ″
1731	11 7 5 19	10 35	13 10	1766	3 4 1 22	41 15	42 20
32	1 0 48 21	11 27	14 0	67	4 27 44 24	42 8	43 10
33	2 28 36 56	12 20	14 50	68	6 21 27 26	43 0	44 0
34	4 22 19 58	13 12	15 40	69	8 19 16 1	43 53	44 50
1735	6 16 3 0	14 5	16 30	1770	10 12 59 3	44 45	45 40
1736	8 9 46 2	14 57	17 20	1771	0 6 42 5	45 38	46 30
37	10 7 34 36	15 50	18 10	72	2 0 25 7	46 30	47 20
38	0 1 17 38	16 43	19 0	73	3 28 13 41	47 23	48 10
39	1 25 0 40	17 35	19 50	74	5 21 56 43	48 15	49 0
1740	3 18 43 42	18 28	20 40	1775	7 15 39 45	49 8	49 50
1741	5 16 32 17	19 21	21 30	1776	9 9 22 47	50 0	50 40
42	7 10 15 19	20 13	22 20	77	11 7 11 21	51 53	51 30
43	9 3 58 21	21 6	23 10	78	1 0 54 23	51 46	52 20
44	10 27 41 23	21 58	24 0	79	2 24 37 25	52 38	53 10
1745	0 25 29 57	22 51	24 50	1780	4 18 20 27	53 31	54 0
1746	2 19 12 59	23 43	25 40	1781	6 16 9 2	54 24	54 50
47	4 12 56 1	24 36	26 30	82	8 9 52 4	55 16	55 40
48	6 6 39 3	25 28	27 20	83	10 3 35 6	56 8	56 30
49	8 4 27 38	26 21	28 10	84	11 27 18 8	57 1	57 20
1750	9 28 10 40	27 14	29 0	1785	1 25 6 42	57 54	58 10
1751	11 21 53 42	28 6	29 50	1786	3 18 49 44	58 46	59 0
52	1 15 36 44	28 59	30 40	87	5 12 32 46	59 39	59 50
53	3 13 25 18	29 52	31 30	88	7 6 15 48	14 0 31	16 0 40
54	5 7 8 20	30 44	32 20	89	9 4 4 23	1 24	1 30
1755	7 0 51 22	31 37	33 10	1790	10 27 47 25	2 17	2 20
1756	8 24 34 24	32 29	34 0	1791	0 21 30 27	3 9	3 10
57	10 22 22 59	33 22	34 50	92	2 15 13 29	4 2	4 0
58	0 16 6 1	34 14	35 40	93	4 13 2 3	4 55	4 50
59	2 9 49 3	35 7	36 30	94	6 6 45 5	5 47	5 40
1760	4 3 32 5	35 59	37 20	1795	8 0 28 7	6 40	6 30
1761	6 1 20 39	36 52	38 10	1796	9 24 11 9	7 32	7 20
62	7 25 3 41	37 44	39 0	97	11 21 59 44	8 25	8 10
63	9 18 46 43	38 37	39 50	98	1 15 42 46	9 17	9 0
64	11 12 29 45	39 29	40 40	99	3 9 25 48	10 10	9 50
1765	1 10 18 20	40 22	41 30	1800	5 3 8 50	11 2	10 40

MEDIVS MOTVS MERCVRII AD DIES MENSIVM.

Die Menſis.	JANUARII				FEBRUARII				MARTII				APRILIS			
	Medius Motus Mercurii.				*Medius Motus Mercurii.*				*Medius Motus Mercurii.*				*Medius Motus Mercurii.*			
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″
1	0	4	5	32	4	10	57	21	8	5	32	33	0	12	24	22
2	0	8	11	5	4	15	2	54	8	9	38	6	0	16	29	55
3	0	12	16	37	4	19	8	26	8	13	43	38	0	20	35	27
4	0	16	22	10	4	23	13	59	8	17	49	11	0	24	41	0
5	0	20	27	43	4	27	19	31	8	21	54	44	0	28	46	32
6	0	24	33	15	5	1	25	4	8	26	0	16	1	2	52	5
7	0	28	38	48	5	5	30	37	9	0	5	49	1	6	57	37
8	1	2	44	20	5	9	36	9	9	4	11	21	1	11	3	10
9	1	6	49	53	5	13	41	42	9	8	16	54	1	15	8	43
10	1	10	55	25	5	17	47	15	9	12	22	26	1	19	14	15
11	1	15	0	58	5	21	52	47	9	16	27	59	1	23	19	48
12	1	19	6	31	5	25	58	19	9	20	33	32	1	27	25	20
13	1	23	12	3	6	0	3	52	9	24	39	5	2	1	30	53
14	1	27	17	36	6	4	9	25	9	28	44	37	2	5	36	25
15	2	1	23	9	6	8	14	57	10	2	50	9	2	9	41	58
16	2	5	28	41	6	12	20	30	10	6	55	42	2	13	47	30
17	2	9	34	13	6	16	26	2	10	11	1	14	2	17	53	3
18	2	13	39	46	6	20	31	35	10	15	6	46	2	21	58	35
19	2	17	45	19	6	24	37	7	10	19	12	19	2	26	4	8
20	2	21	50	51	6	28	42	40	10	23	17	51	3	0	9	41
21	2	25	56	23	7	2	48	12	10	27	23	24	3	4	15	13
22	3	0	1	56	7	6	53	45	11	1	28	56	3	8	20	45
23	3	4	7	28	7	10	59	17	11	5	34	29	3	12	26	18
24	3	8	13	1	7	15	4	50	11	9	40	1	3	16	31	51
25	3	12	18	34	7	19	10	22	11	13	45	34	3	20	37	23
26	3	16	24	6	7	23	15	55	11	17	51	7	3	24	42	56
27	3	20	29	39	7	27	21	28	11	21	56	39	3	28	48	28
28	3	24	35	11	8	1	27	1	11	26	2	12	4	2	54	1
29	3	28	40	44	*In Anno* Biſſextili *poſt* Februarium *adde unius diei motum.*				0	0	7	45	4	6	59	34
30	4	2	46	17					0	4	13	18	4	11	5	7
31	4	6	51	49			′	″	0	8	18	50			′	″
	Mot. Aph. & Nodi.		′	″												
			0	4			0	9			0	13			0	17

MEDIVS MOTVS MERCVRII AD DIES MENSIVM.

Die Menſis.	MAII				JUNII				JULII				AUGUSTI			
	Medius Motus Mercurii.				*Motus Medius Mercurii.*				*Medius Motus Mercurii.*				*Motus Medius Mercurii.*			
	s	°	'	''	s	°	'	''	s	°	'	''	s	°	'	''
1	4	15	10	39	8	22	2	28	0	24	48	45	5	1	40	33
2	4	19	16	12	8	26	8	0	0	28	54	17	5	5	46	6
3	4	23	21	44	9	0	13	33	1	2	59	50	5	9	51	38
4	4	27	27	17	9	4	19	5	1	7	5	22	5	13	57	11
5	5	1	32	49	9	8	24	38	1	11	10	55	5	18	2	43
6	5	5	38	22	9	12	30	10	1	15	16	28	5	22	8	16
7	5	9	43	54	9	16	35	43	1	19	22	0	5	26	13	48
8	5	13	49	27	9	20	41	15	1	23	27	32	6	0	19	21
9	5	17	55	0	9	24	46	48	1	27	33	5	6	4	24	53
10	5	22	0	32	9	28	52	20	2	1	38	37	6	8	30	26
11	5	26	6	5	10	2	57	53	2	5	44	10	6	12	35	58
12	6	0	11	37	10	7	3	25	2	9	49	42	6	16	41	31
13	6	4	17	10	10	11	8	58	2	13	55	15	6	20	47	3
14	6	8	22	43	10	15	14	31	2	18	0	48	6	24	52	36
15	6	12	28	15	10	19	20	3	2	22	6	21	6	28	58	9
16	6	16	33	48	10	23	25	36	2	26	11	53	7	3	3	41
17	6	20	39	20	10	27	31	8	3	0	17	26	7	7	9	14
18	6	24	44	53	11	1	36	41	3	4	22	58	7	11	14	46
19	6	28	50	25	11	5	42	14	3	8	28	30	7	15	20	19
20	7	2	55	58	11	9	47	46	3	12	34	3	7	19	25	51
21	7	7	1	30	11	13	53	19	3	16	39	35	7	23	31	24
22	7	11	7	3	11	17	58	51	3	20	45	8	7	27	36	56
23	7	15	12	35	11	22	4	24	3	24	50	40	8	1	42	29
24	7	19	18	8	11	26	9	57	3	28	56	13	8	5	48	2
25	7	23	23	41	0	0	15	30	4	3	1	46	8	9	53	35
26	7	27	29	13	0	4	21	2	4	7	7	18	8	13	59	8
27	8	1	34	46	0	8	26	35	4	11	12	51	8	18	4	41
28	8	5	40	18	0	12	32	7	4	15	18	24	8	22	10	14
29	8	9	45	51	0	16	37	40	4	19	23	56	8	26	15	46
30	8	13	51	23	0	20	43	12	4	23	29	28	9	0	21	18
31	8	17	56	56			'	''	4	27	35	1	9	4	26	51
	Mot. Aph. & Nodi.		0	22			0	26			0	30			0	35

MEDIVS MOTVS MERCVRII AD DIES MENSIVM.

Die Menſis.	SEPTEMB.				OCTOBRIS				NOVEMB.				DECEMB.			
	Medius Motus Mercurii.				*Medius Motus Mercurii.*				*Medius Motus Mercurii.*				*Medius Motus Mercurii.*			
	s	°	'	"	s	°	'	"	s	°	'	"	s	°	'	"
1	9	8	32	23	1	11	18	40	5	18	10	29	9	20	56	45
2	9	12	37	56	1	15	24	13	5	22	16	1	9	25	2	17
3	9	16	43	38	1	19	29	45	5	26	21	34	9	29	7	50
4	9	20	49	1	1	23	35	17	6	0	27	6	10	3	13	23
5	9	24	54	33	1	27	40	50	6	4	32	39	10	7	18	55
6	9	29	0	6	2	1	46	23	6	8	38	11	10	11	24	28
7	10	3	5	38	2	5	51	55	6	12	43	44	10	15	30	1
8	10	7	11	11	2	9	57	28	6	16	49	17	10	19	35	33
9	10	11	16	43	2	14	3	0	6	20	54	49	10	23	41	6
10	10	15	22	16	2	18	8	33	6	25	0	22	10	27	46	38
11	10	19	27	48	2	22	14	5	6	29	5	54	11	1	52	11
12	10	23	33	21	2	26	19	38	7	3	11	27	11	5	57	43
13	10	27	38	54	3	0	25	11	7	7	16	59	11	10	3	16
14	11	1	44	27	3	4	30	43	7	11	22	32	11	14	8	49
15	11	5	49	59	3	8	36	16	7	15	28	5	11	18	14	21
16	11	9	55	32	3	12	41	49	7	19	33	37	11	22	19	54
17	11	14	1	4	3	16	47	21	7	23	39	9	11	26	25	26
18	11	18	6	37	3	20	52	53	7	27	44	42	0	0	30	59
19	11	22	12	9	3	24	58	26	8	1	50	15	0	4	36	22
20	11	26	17	42	3	29	3	59	8	5	55	47	0	8	42	4
21	0	0	23	15	4	3	9	31	8	10	1	20	0	12	47	37
22	0	4	28	47	4	7	15	4	8	14	6	52	0	16	53	10
23	0	8	34	20	4	11	20	36	8	18	12	25	0	20	58	42
24	0	12	39	53	4	15	26	9	8	22	17	57	0	25	4	15
25	0	16	45	25	4	19	31	41	8	26	23	30	0	29	9	47
26	0	20	50	58	4	23	37	14	9	0	29	3	1	3	15	19
27	0	24	56	30	4	27	42	46	9	4	34	35	1	7	20	52
28	0	29	2	3	5	1	48	19	9	8	40	7	1	11	26	25
29	1	3	7	35	5	5	53	51	9	12	45	40	1	15	31	57
30	1	7	13	7	5	9	59	24	9	16	51	13	1	19	37	30
31			'	"	5	14	4	56			'	"	1	23	43	2
	Mot. Aph. & Nodi.		0	39			0	43			0	48			0	52

MEDII MOTUS MERCURII AB ÆQUINOCTIO.

IN ANNORUM CENTURIIS.

Annis Julian. Collect.	Medius Motus Mercurii.				Mot. Aphel. Mercurii.				Motus Nodi Mercurii.			
	s	°	′	″	s	°	′	″	s	°	′	″
100	2	14	1	53	0	1	27	37	0	1	23	20
200	4	28	3	46	0	2	55	14	0	2	46	40
300	7	12	5	39	0	4	22	51	0	4	10	0
400	9	26	7	32	0	5	50	28	0	5	33	20
500	0	10	9	25	0	7	18	5	0	6	56	40
600	2	24	11	18	0	8	45	42	0	8	20	0
700	5	8	13	11	0	10	13	19	0	9	43	20
800	7	22	15	4	0	11	40	56	0	11	6	40
900	10	6	16	57	0	13	8	33	0	12	30	0
1000	0	20	18	50	0	14	36	10	0	13	53	20
1100	3	4	20	43	0	16	3	47	0	15	16	40
1200	5	18	22	36	0	17	31	24	0	16	40	0
1300	8	2	24	29	0	18	59	1	0	18	3	20
1400	10	16	26	22	0	20	26	38	0	19	26	40
1500	1	0	28	15	0	21	54	15	0	20	50	0
1600	3	14	30	8	0	23	21	52	0	22	13	20
1700	5	28	32	1	0	24	49	29	0	23	36	40
1800	8	12	33	54	0	26	17	6	0	25	0	0
1900	10	26	35	47	0	27	44	43	0	26	23	20
2000	1	10	37	40	0	29	12	20	0	27	46	40
2100	3	24	39	33	1	0	39	57	0	29	10	0
2200	6	8	41	26	1	2	7	34	1	0	33	20
2300	8	22	43	19	1	3	35	11	1	1	56	40
2400	11	6	45	12	1	5	2	48	1	3	20	0
2500	1	20	47	5	1	6	30	25	1	4	43	20
2600	4	4	48	58	1	7	58	2	1	6	6	40
2700	6	18	50	51	1	9	25	39	1	7	30	0
2800	9	2	52	44	1	10	53	16	1	8	53	20
2900	11	16	54	37	1	12	20	53	1	10	16	40
3000	2	0	56	30	1	13	48	30	1	11	40	0
3100	4	14	58	23	1	15	16	7	1	13	3	20
3200	6	29	0	16	1	16	43	44	1	14	26	40

IN HORIS ET MIN.

Medius Motus Mercurii.							
″ ′ H.	″ ′ °.	‴ ″ ′	⁗ ‴ ″	″ ′ H.	″ ′ °.	‴ ″ ′	⁗ ‴ ″
1	0	10	14	31	5	17	9
2	0	20	28	32	5	27	23
3	0	30	42	33	5	37	37
4	0	40	55	34	5	47	51
5	0	51	9	35	5	58	5
6	1	1	23	36	6	8	18
7	1	11	37	37	6	18	32
8	1	21	51	38	6	28	46
9	1	32	5	39	6	39	0
10	1	42	18	40	6	49	14
11	1	52	32	41	6	59	28
12	2	2	46	42	7	9	42
13	2	13	0	43	7	19	55
14	2	23	14	44	7	30	9
15	2	33	28	45	7	40	23
16	2	43	42	46	7	50	37
17	2	53	55	47	8	0	51
18	3	4	9	48	8	11	5
19	3	14	23	49	8	21	19
20	3	24	37	50	8	31	32
21	3	34	51	51	8	41	46
22	3	45	5	52	8	52	0
23	3	55	19	53	9	2	14
24	4	5	32	54	9	12	28
25	4	15	46	55	9	22	42
26	4	26	0	56	9	32	55
27	4	36	14	57	9	43	9
28	4	46	28	58	9	53	23
29	4	56	42	59	10	3	37
30	5	6	55	60	10	13	50

TABULA ÆQUATIONUM MERCURII.

Anomalia media Mercurii.

Gr.	Sig. 0. Subtr. ° ′ ″	Diff. ′ ″	Sig. I. Subtr. ° ′ ″	Diff. ′ ″	Sig. II. Subtr. ° ′ ″	Diff. ′ ″	
0	0 0 0		9 35 33		17 48 34		30
1	0 19 37	19 37	9 53 48	18 15	18 2 29	13 55	29
2	0 39 14	19 37	10 11 58	18 10	18 16 11-	13 42	28
3	0 58 51	19 37	10 30 2	18 4	18 29 41-	13 30	27
4	1 18 27	19 36	10 48 0	17 58	18 42 58-	13 17	26
5	1 38 3	19 36	11 5 52	17 52	18 56 2-	13 4	25
6	1 57 38	19 35	11 23 37	17 45	19 8 53-	12 51	24
7	2 17 12	19 34	11 41 15	17 38	19 21 30-	12 37	23
8	2 36 44	19 32	11 58 47	17 32	19 33 53-	12 23	22
9	2 56 15	19 31	12 16 12	17 25	19 46 3	12 10	21
10	3 15 45	19 30	12 33 30	17 18	19 57 58	11 55	20
11	3 35 13	19 28	12 50 40	17 10	20 9 37	11 39	19
12	3 54 39	19 26	13 7 42	17 2	20 21 2	11 25	18
13	4 14 3	19 24	13 24 37	16 55	20 32 11-	11 9	17
14	4 33 24	19 21	13 41 24	16 47	20 43 5-	10 54	16
15	4 52 43	19 19	13 58 2	16 38	20 53 43-	10 38	15
16	5 12 0	19 17	14 14 32	16 30	21 4 5	10 22	14
17	5 31 14	19 14	14 30 53	16 21	21 14 10	10 5	13
18	5 50 24	19 10	14 47 6	16 13	21 23 58-	9 48	12
19	6 9 31	19 7	15 3 9	16 3	21 33 30	9 32	11
20	6 28 36	19 5	15 19 3	15 54	21 42 44	9 14	10
21	6 47 36	19 0	15 34 47	15 44	21 51 39	8 55	9
22	7 6 33	18 57	15 50 21	15 34	22 0 16	8 37	8
23	7 25 26	18 53	16 5 45	15 24	22 8 36	8 20	7
24	7 44 15	18 49	16 20 59	15 14	22 16 37-	8 1	6
25	8 3 0	18 45	16 36 2	15 3	22 24 19	7 42	5
26	8 21 40	18 40	16 50 55	14 53	22 31 41	7 22	4
27	8 40 15	18 35	17 5 37	14 42	22 38 43	7 2	3
28	8 58 46	18 31	17 20 8	14 31	22 45 25	6 42	2
29	9 17 12	18 26	17 34 27	14 19	22 51 47	6 22	1
30	9 35 33	18 21	17 48 34	14 7	22 57 49	6 2	0
	Sig. XI. Adde.	Diff.	Sig. X. Adde.	Diff.	Sig. IX. Adde.	Diff.	Gr.

TABULA ÆQUATIONUM MERCURII.

Anomalia media Mercurii.

	Sig. III. *Subtr.*	*Diff.*	Sig. IV. *Subtr.*	*Diff.*	Sig. V. *Subtr.*	*Diff.*	
Gr.	° ′ ″	′ ″	° ′ ″	′ ″	° ′ ″	′ ″	
0	22 57 49		22 48 11		14 57 14		30
1	23 3 29	5 40	22 40 33	7 38	14 32 56	24 18	29
2	23 8 48-	5 19	22 32 22-	8 11	14 8 7	24 49	28
3	23 13 45	4 57	22 23 40	8 42	13 42 48	25 19	27
4	23 18 19-	4 34	22 14 25	9 15	13 16 59	25 49	26
5	23 22 31-	4 12	22 4 38	9 47	12 50 40	26 19	25
6	23 26 21	3 50	21 54 18-	10 20	12 23 52	26 48	24
7	23 29 47	3 26	21 43 25-	10 53	11 56 37	27 15	23
8	23 32 50	3 3	21 31 59	11 26	11 28 57	27 40	22
9	23 35 28	2 38	21 19 59	12 0	11 0 50-	28 7	21
10	23 37 42	2 14	21 7 25	12 34	10 32 18	28 33	20
11	23 39 31-	1 49	20 54 17	13 8	10 3 21-	28 57	19
12	23 40 56	1 25	20 40 35	13 42	9 34 0	29 21	18
13	23 41 55	0 59	20 26 20	14 15	9 4 17-	29 43	17
14	23 42 29	0 34	20 11 31	14 49	8 34 13	30 4	16
15	23 42 36	0 7	19 56 8	15 23	8 3 47-	30 26	15
16	23 42 18	0 18	19 40 9-	15 58	7 33 2	30 45	14
17	23 41 32	0 46	19 23 36-	16 33	7 2 1	31 1	13
18	23 40 18	1 14	19 6 29-	17 7	6 30 41	31 20	12
19	23 38 37	1 41	18 48 48	17 41	5 59 5	31 36	11
20	23 36 29	2 8	18 30 32	18 16	5 27 14	31 51	10
21	23 33 52	2 37	18 11 43	18 49	4 55 11	32 3	9
22	23 30 46	3 6	17 52 20	19 23	4 22 55	32 16	8
23	23 27 11	3 35	17 32 23	19 57	3 50 27-	32 28	7
24	23 23 8	4 3	17 11 52	20 31	3 17 48-	32 39	6
25	23 18 35	4 33	16 50 47	21 5	2 45 2	32 46	5
26	23 13 31-	5 4	16 29 9	21 38	2 12 10	32 52	4
27	23 7 57	5 34	16 6 59	22 10	1 39 12	32 58	3
28	23 1 52-	6 5	15 44 16	22 43	1 6 11	33 2	2
29	22 55 17	6 35	15 21 1-	23 15	0 33 6	33 5	1
30	22 48 11	7 6	14 57 14	23 47	0 0 0	33 6	0
	Sig. VIII. *Adde.*	*Diff.*	Sig. VII. *Adde.*	*Diff.*	Sig. VI. *Adde.*	*Diff.*	

LOGARITHMI DISTANTIARUM MERCURII A SOLE.

Anomalia media Mercurii.

Gr.	Sig. o. Logar.	Differentia.	Sig. I. Logar.	Differentia.	Sig. II. Logar.	Differentia.	
0	4 669131		4 662120		4 640896		30
1	4 669123	8	4 661643	477	4 639940	956	29
2	4 669100	23	4 661151	492	4 638968	972	28
3	4 669061	39	4 660643	508	4 637980	988	27
4	4 669006	55	4 660119	524	4 636976	1004	26
5	4 668936	70	4 659579	540	4 635956	1020	25
6	4 668851	85	4 659024	555	4 634920	1036	24
7	4 668750	101	4 658452	572	4 633868	1052	23
8	4 668633	117	4 657864	588	4 632800	1068	22
9	4 668501	132	4 657261	603	4 631716	1084	21
10	4 668353	148	4 656642	619	4 630617	1099	20
11	4 668190	163	4 656007	635	4 629501	1116	19
12	4 668012	178	4 655356	651	4 628370	1131	18
13	4 667817	195	4 654688	667	4 627223	1147	17
14	4 667607	210	4 654005	683	4 626060	1163	16
15	4 667382	225	4 653306	699	4 624881	1179	15
16	4 667141	241	4 652591	715	4 623687	1194	14
17	4 666884	257	4 651860	731	4 622478	1209	13
18	4 666612	272	4 651113	747	4 621253	1225	12
19	4 666324	288	4 650350	763	4 620012	1241	11
20	4 666020	304	4 649571	779	4 618756	1256	10
21	4 665701	319	4 648775	796	4 617485	1271	9
22	4 665365	336	4 647964	811	4 616199	1286	8
23	4 665014	351	4 647136	828	4 614898	1301	7
24	4 664648	366	4 646293	843	4 613582	1316	6
25	4 664266	382	4 645433	860	4 612251	1331	5
26	4 663868	398	4 644558	875	4 610905	1346	4
27	4 663455	413	4 643667	891	4 609545	1360	3
28	4 663026	429	4 642759	908	4 608170	1375	2
29	4 662581	445	4 641835	924	4 606781	1389	1
30	4 662120	461	4 640896	939	4 605378	1403	0
	Sig. XI.	Diff.	Sig. X.	Diff.	Sig. IX.	Diff.	Gr.

LOGARITHMI DISTANTIARVM MERCVRII A SOLE.

Anomalia media Mercurii.

Gr.	Sig. III. Logar.	Differentia.	Sig. IV. Logar.	Differentia.	Sig. V. Logar.	Differentia.	
0	4 605378	1417	4 557951	1696	4 509939	1333	30
1	4 603961	1431	4 556255	1698	4 508606	1304	29
2	4 602530	1445	4 554557	1698	4 507302	1272	28
3	4 601085	1458	4 552859	1699	4 506030	1239	27
4	4 599627	1472	4 551160	1698	4 504791	1205	26
5	4 598155	1484	4 549462	1698	4 503586	1170	25
6	4 596671	1497	4 547764	1695	4 502416	1133	24
7	4 595174	1510	4 546069	1692	4 501283	1097	23
8	4 593664	1522	4 544377	1688	4 500186	1057	22
9	4 592142	1534	4 542689	1684	4 499129	1016	21
10	4 590608	1546	4 541005	1677	4 498113	976	20
11	4 589062	1557	4 539328	1672	4 497137	933	19
12	4 587505	1568	4 537656	1663	4 496204	890	18
13	4 585937	1579	4 535993	1655	4 495314	844	17
14	4 584358	1590	4 534338	1645	4 494470	799	16
15	4 582768	1600	4 532693	1635	4 493671	752	15
16	4 581168	1610	4 531058	1623	4 492919	704	14
17	4 579558	1619	4 529435	1610	4 492215	658	13
18	4 577939	1628	4 527825	1596	4 491557	607	12
19	4 576311	1636	4 526229	1581	4 490950	557	11
20	4 574675	1645	4 524648	1564	4 490393	506	10
21	4 573030	1652	4 523084	1547	4 489887	455	9
22	4 571378	1659	4 521537	1528	4 489432	403	8
23	4 569719	1666	4 520009	1508	4 489029	350	7
24	4 568053	1672	4 518501	1487	4 488679	297	6
25	4 566381	1677	4 517014	1466	4 488382	244	5
26	4 564704	1682	4 515548	1441	4 488138	190	4
27	4 563022	1687	4 514107	1416	4 487948	135	3
28	4 561335	1690	4 512691	1390	4 487813	81	2
29	4 559645	1694	4 511301	1362	4 487732	28	1
30	4 557951		4 509939		4 487704		0
	Sig. VIII.	Diff.	Sig. VII.	Diff.	Sig. VI	Diff.	Gr.

TABULA LATITUDINARIA MERCURII.

Argument. Latitudinis.	Sig. 0. Bor. Sig. 6. Auſt Inclinatio.			Subtr. Subtr Reduct.		Curtatio	Sig. 1. Bor. Sig. 7. Auſt. Inclinatio.			Subtr. Subtr. Reduct.		Curtatio.	Sig. 2. Bor. Sig. 8. Auſt. Inclinatio.			Subtr. Subtr. Reduct.		Curtatio.	
Gr.	°	′	″	′	″	Log.	°	′	″	′	″	Log.	°	′	″	′	″	Log.	
0	0	0	0	0	0	0	3	29	17	11	5	805	6	2	56	11	7	2425	30
1	0	7	18	0	27	1	3	35	35	11	18	855	6	6	32	10	54	2473	29
2	0	14	36	0	53	4	3	41	49	11	30	905	6	10	2	10	39	2521	28
3	0	21	54	1	20	9	3	47	59	11	42	956	6	13	26	10	24	2567	27
4	0	29	11	1	47	16	3	54	5	11	52	1008	6	16	43	10	7	2613	26
5	0	36	27	2	13	24	4	0	7	12	2	1060	6	19	52	9	51	2657	25
6	0	43	43	2	39	35	4	6	4	12	11	1114	6	22	55	9	33	2700	24
7	0	50	59	3	5	48	4	11	58	12	19	1168	6	25	51	9	15	2741	23
8	0	58	13	3	31	62	4	17	46	12	26	1222	6	28	40	8	56	2781	22
9	1	5	26	3	57	79	4	23	30	12	32	1277	6	31	21	8	36	2820	21
10	1	12	38	4	22	97	4	29	9	12	37	1333	6	33	56	8	16	2858	20
11	1	19	49	4	47	117	4	34	43	12	41	1388	6	36	23	7	55	2894	19
12	1	26	58	5	12	139	4	40	12	12	45	1444	6	38	43	7	33	2928	18
13	1	34	6	5	36	163	4	45	36	12	47	1501	6	40	55	7	11	2960	17
14	1	41	12	6	0	188	4	50	55	12	48	1557	6	43	1	6	49	2991	16
15	1	48	17	6	23	215	4	56	9	12	49	1614	6	44	58	6	26	3021	15
16	1	55	19	6	46	244	5	1	17	12	48	1670	6	46	49	6	2	3048	14
17	2	2	19	7	9	275	5	6	19	12	47	1726	6	48	32	5	38	3074	13
18	2	9	17	7	31	307	5	11	16	12	45	1783	6	50	7	5	14	3098	12
19	2	16	13	7	52	341	5	16	8	12	42	1839	6	51	35	4	49	3120	11
20	2	23	6	8	13	376	5	20	54	12	38	1895	6	52	56	4	24	3141	10
21	2	29	57	8	33	413	5	25	34	12	33	1951	6	54	9	3	58	3159	9
22	2	36	45	8	53	452	5	30	7	12	27	2006	6	55	14	3	33	3176	8
23	2	43	30	9	12	491	5	34	35	12	20	2060	6	56	11	3	7	3191	7
24	2	50	12	9	30	532	5	38	57	12	12	2114	6	57	1	2	40	3203	6
25	2	56	51	9	48	575	5	43	13	12	3	2167	6	57	44	2	14	3214	5
26	3	3	27	10	5	619	5	47	22	11	54	2220	6	58	18	1	47	3223	4
27	3	10	0	10	21	664	5	51	25	11	44	2273	6	58	45	1	21	3230	3
28	3	16	29	10	36	710	5	55	22	11	33	2325	6	59	4	0	54	3235	2
29	3	22	55	10	51	757	5	59	12	11	20	2375	6	59	16	0	27	3238	1
30	3	29	17	11	5	805	6	2	56	11	7	2425	6	59	20	0	0	3239	0
	Sig. 11. Auſt. Sig. 5. Bor.			Adde. Adde.			Sig. 10. Auſt. Sig. 4. Bor.			Adde. Adde.			Sig. 9. Auſt. Sig. 3. Bor.			Adde. Adde.			Gr.

EPOCHÆ MEDIORUM MOTUUM VENERIS.

Annis Julianis ineuntibus.	*Venus ab Æquinoct.*	*Aphel.* ♀ ♒ 5°	*Nod.* ♀ ♊ 13°	*Annis Julianis ineuntibus.*	*Venus ab Æquinoct.*	*Aph.* ♀ ♒ 6°	*Nodus* ♀ ♊ 13°
	s ° ′ ″	° ′ ″	′ ″		s ° ′ ″	′ ″	° ′ ″
1661	6 2 16 18	54 47	37 44	1696	4 22 47 21	27 44	55 49
62	1 17 3 47	55 44	38 15	97	0 9 10 58	28 40	56 20
63	9 1 51 16	56 40	38 46	98	7 23 58 27	29 37	56 51
64	4 16 38 45	57 36	39 17	99	3 8 45 57	30 33	57 22
1665	0 3 2 22	58 33	39 48	1700	10 23 33 26	31 29	57 53
1666	7 17 49 52	59 29	40 19	1701	6 9 57 3	32 26	58 24
67	3 2 37 21	6 0 26	40 50	2	1 24 44 32	33 22	58 55
68	10 17 24 50	1 22	41 21	3	9 9 32 1	34 19	59 26
69	6 3 48 27	2 19	41 52	4	4 24 19 30	35 15	59 57
1670	1 18 35 56	3 15	42 23	1705	0 10 43 7	36 11	14 0 28
1671	9 3 23 25	4 11	42 54	1706	7 25 30 36	37 8	0 59
72	4 18 10 54	5 8	43 25	7	3 10 18 6	38 5	1 30
73	0 4 34 31	6 5	43 56	8	10 25 5 35	39 1	2 1
74	7 19 22 1	7 1	44 27	9	6 11 29 12	39 58	2 32
1675	3 4 9 30	7 57	44 58	1710	1 26 16 41	40 54	3 3
1676	10 18 56 59	8 54	45 29	1711	9 11 4 10	41 50	3 34
77	6 5 20 36	9 50	46 0	12	4 25 51 39	42 47	4 5
78	1 20 8 5	10 47	46 31	13	0 12 15 16	43 44	4 36
79	9 4 55 34	11 44	47 2	14	7 27 2 45	44 40	5 7
1680	4 19 43 3	12 40	47 33	1715	3 11 50 15	45 37	5 38
1681	0 6 6 40	13 36	48 4	1716	10 26 37 44	46 33	6 9
82	7 20 54 10	14 33	48 35	17	6 13 1 21	47 29	6 40
83	3 5 41 39	15 29	49 6	18	1 27 48 50	48 26	7 11
84	10 20 29 8	16 26	49 37	19	9 12 36 19	49 22	7 42
1685	6 6 52 45	17 22	50 8	1720	4 27 23 48	50 19	8 13
1686	1 21 40 14	18 19	50 39	1721	0 13 47 25	51 15	8 44
87	9 6 27 43	19 15	51 10	22	7 28 34 54	52 11	9 15
88	4 21 15 12	20 12	51 41	23	3 13 22 24	53 8	9 46
89	0 7 38 49	21 8	52 12	24	10 28 9 53	54 5	10 17
1690	7 22 26 18	22 5	52 43	1725	6 14 33 30	55 1	10 48
1691	3 7 13 48	23 1	53 14	1726	1 29 20 59	55 58	11 19
92	10 22 1 17	23 58	53 45	27	9 14 8 28	56 54	11 50
93	6 8 24 54	24 54	54 16	28	4 28 55 57	57 50	12 21
94	1 23 12 23	25 50	54 47	29	0 15 19 34	58 47	12 52
1695	9 7 59 52	26 47	55 18	1730	8 0 7 3	59 44	13 23

EPOCHÆ MEDIORUM MOTUUM VENERIS.

Annis Julianis ineuntibus.	*Venus ab Æquinoct.*				*Aphel.* ♀ ♒ 7°			*Nod.* ♀ ♊ 14°		*Annis Julianis ineuntibus.*	*Venus ab Æquinoct.*				*Aphel.* ♀ ♒ 7°			*Nod.* ♀ ♊ 14°	
	s	°	′	″	°	′	″	′	″		s	°	′	″	°	′	″	′	″
1731	3	14	54	32	7	0	40	13	54	1766	2	7	1	44		33	36	31	59
32	10	29	42	2		1	36	14	25	67	9	21	49	13		34	33	32	30
33	6	16	5	39		2	33	14	56	68	5	6	36	42		35	29	33	1
34	2	0	53	8		3	29	15	27	69	0	23	0	19		36	26	33	32
1735	9	15	40	37		4	26	15	58	1770	8	7	47	48		37	22	34	3
1736	5	0	28	6		5	22	16	29	1771	3	22	35	17		38	19	34	34
37	0	16	51	43		6	19	17	0	72	11	7	22	46		39	15	35	5
38	8	1	39	12		7	15	17	31	73	6	23	46	23		40	12	35	36
39	3	16	26	41		8	12	18	2	74	2	8	33	53		41	8	36	7
1740	11	1	14	11		9	8	18	33	1775	9	23	21	22		42	5	36	38
1741	6	17	37	48		10	5	19	4	1776	5	8	8	51		43	2	37	9
42	2	2	25	17		11	2	19	35	77	0	24	32	28		43	58	37	40
43	9	17	12	46		11	58	20	6	78	8	9	19	57		44	55	38	11
44	5	2	0	15		12	55	20	37	79	3	24	7	26		45	51	38	42
1745	0	18	23	52		13	51	21	8	1780	11	8	54	55		46	48	39	13
1746	8	3	11	21		14	48	21	39	1781	6	25	18	32		47	44	39	44
47	3	17	58	50		15	44	22	10	82	2	10	6	1		48	40	40	15
48	11	2	46	20		16	40	22	41	83	9	24	53	31		49	36	40	46
49	6	19	9	57		17	36	23	12	84	5	9	41	0		50	33	41	17
1750	2	3	57	26		18	33	23	43	1785	0	26	4	37		51	29	41	48
1751	9	18	44	55		19	29	24	14	1786	8	10	52	6		52	26	42	19
52	5	3	32	24		20	26	24	45	87	3	25	39	35		53	22	42	50
53	0	19	56	1		21	22	25	16	88	11	10	27	4		54	19	43	21
54	8	4	43	30		22	19	25	47	89	6	26	50	41		55	15	43	52
1755	3	19	30	59		23	15	26	18	1790	2	11	38	10		56	12	44	23
1756	11	4	18	28		24	12	26	49	1791	9	26	25	40		57	8	44	54
57	6	20	42	5		25	8	27	20	92	5	11	13	9		58	5	45	25
58	2	5	29	35		26	5	27	51	93	0	27	36	46		59	2	45	56
59	9	20	17	4		27	2	28	22	94	8	12	24	15		59	58	46	27
1760	5	5	4	33		27	58	28	53	1795	3	27	11	44	8	0	55	46	58
1761	0	21	28	10		28	55	29	24	1796	11	11	59	13		1	51	47	29
62	8	6	15	39		29	51	29	55	97	6	28	22	50		2	48	48	0
63	3	21	3	8		30	48	30	26	98	2	13	10	19		3	44	48	31
64	11	5	50	37		31	44	30	57	99	9	27	57	49		4	40	49	2
1765	6	22	14	14		32	40	31	28	1800	5	12	45	18		5	36	49	33

MEDIUS MOTUS VENERIS AD DIES MENSIUM.

	JANUARII				FEBRUARII				MARTII				APRILIS			
Die Menſis.	*Medius Motus Veneris.*				*Medius Motus Veneris.*				*Medius Motus Veneris.*				*Medius Motus Veneris.*			
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″
1	0	1	36	8	1	21	16	10	3	6	7	48	4	25	47	50
2	0	3	12	16	1	22	52	17	3	7	43	56	4	27	23	58
3	0	4	48	23	1	24	28	25	3	9	20	4	4	29	0	6
4	0	6	24	31	1	26	4	33	3	10	56	12	5	0	36	13
5	0	8	0	39	1	27	40	41	3	12	32	19	5	2	12	21
6	0	9	36	47	1	29	16	49	3	14	8	27	5	3	48	29
7	0	11	12	55	2	0	52	56	3	15	44	35	5	5	24	37
8	0	12	49	2	2	2	29	4	3	17	20	43	5	7	0	45
9	0	14	25	10	2	4	5	12	3	18	56	51	5	8	36	52
10	0	16	1	18	2	5	41	20	3	20	32	58	5	10	13	0
11	0	17	37	26	2	7	17	28	3	22	9	6	5	11	49	8
12	0	19	13	34	2	8	53	36	3	23	45	14	5	13	25	16
13	0	20	49	41	2	10	29	43	3	25	21	22	5	15	1	24
14	0	22	25	49	2	12	5	51	3	26	57	30	5	16	37	31
15	0	24	1	57	2	13	41	59	3	28	33	37	5	18	13	39
16	0	25	38	5	2	15	18	7	4	0	9	45	5	19	49	47
17	0	27	14	13	2	16	54	15	4	1	45	53	5	21	25	55
18	0	28	50	20	2	18	30	22	4	3	22	1	5	23	2	3
19	1	0	26	28	2	20	6	30	4	4	58	9	5	24	38	10
20	1	2	2	36	2	21	42	38	4	6	34	16	5	26	14	18
21	1	3	38	44	2	23	18	46	4	8	10	24	5	27	50	26
22	1	5	14	52	2	24	54	54	4	9	46	32	5	29	26	34
23	1	6	50	59	2	26	31	1	4	11	22	40	6	1	2	42
24	1	8	27	7	2	28	7	9	4	12	58	48	6	2	38	49
25	1	10	3	15	2	29	43	17	4	14	34	55	6	4	14	57
26	1	11	39	23	3	1	19	25	4	16	11	3	6	5	51	5
27	1	13	15	31	3	2	55	33	4	17	47	11	6	7	27	13
28	1	14	51	38	3	4	31	40	4	19	23	19	6	9	3	21
29	1	16	27	46	*In Anno* Biſſextili *poſt* Februarium *adde unius diei motum.*				4	20	59	27	6	10	39	28
30	1	18	3	54					4	22	35	34	6	12	15	36
31	1	19	40	2			′	″	4	24	11	42			′	″
	Mot.Aph.		0	5			0	9			0	14			0	19
	Mot.Nod.		0	3			0	5			0	8			0	11

MEDIUS MOTUS VENERIS AD DIES MENSIUM.

Die Menſis.	MAII				JUNII				JULII				AUGUSTI			
	Medius Motus Veneris.				*Medius Motus Veneris.*				*Medius Motus Veneris.*				*Medius Motus Veneris.*			
	s	°	'	''	s	°	'	''	s	°	'	''	s	°	'	''
1	6	13	51	44	8	3	31	46	9	21	35	40	11	11	15	42
2	6	15	27	52	8	5	7	54	9	23	11	48	11	12	51	50
3	6	17	4	0	8	6	44	2	9	24	47	56	11	14	27	58
4	6	18	40	8	8	8	20	9	9	26	24	3	11	16	4	5
5	6	20	16	15	8	9	56	17	9	28	0	11	11	17	40	13
6	6	21	52	23	8	11	32	25	9	29	36	19	11	19	16	21
7	6	23	28	31	8	13	8	33	10	1	12	27	11	20	52	29
8	6	25	4	39	8	14	44	41	10	2	48	35	11	22	28	37
9	6	26	40	47	8	16	20	48	10	4	24	43	11	24	4	44
10	6	28	16	54	8	17	56	56	10	6	0	50	11	25	40	52
11	6	29	53	2	8	19	33	4	10	7	36	58	11	27	17	0
12	7	1	29	10	8	21	9	12	10	9	13	6	11	28	53	8
13	7	3	5	18	8	22	45	20	10	10	49	14	0	0	29	16
14	7	4	41	26	8	24	21	27	10	12	25	22	0	2	5	23
15	7	6	17	33	8	25	57	35	10	14	1	29	0	3	41	31
16	7	7	53	41	8	27	33	43	10	15	37	37	0	5	17	39
17	7	9	29	49	8	29	9	51	10	17	13	45	0	6	53	47
18	7	11	5	57	9	0	45	59	10	18	49	53	0	8	29	55
19	7	12	42	5	9	2	22	6	10	20	26	1	0	10	6	2
20	7	14	18	12	9	3	58	14	10	22	2	8	0	11	42	10
21	7	15	54	20	9	5	34	22	10	23	38	16	0	13	18	18
22	7	17	30	28	9	7	10	30	10	25	14	24	0	14	54	26
23	7	19	6	36	9	8	46	38	10	26	50	32	0	16	30	34
24	7	20	42	44	9	10	22	45	10	28	26	40	0	18	6	41
25	7	22	18	51	9	11	58	53	11	0	2	47	0	19	42	49
26	7	23	54	59	9	13	35	1	11	1	38	55	0	21	18	57
27	7	25	31	7	9	15	11	9	11	3	15	3	0	22	55	5
28	7	27	7	15	9	16	47	17	11	4	51	11	0	24	31	13
29	7	28	43	23	9	18	23	24	11	6	27	19	0	26	7	20
30	8	0	19	30	9	19	59	32	11	8	3	26	0	27	43	28
31	8	1	55	38			'	''	11	9	39	34	0	29	19	36
	Mot.Aph.		0	23			0	28			0	32			0	37
	Mot.Nod.		0	13			0	15			0	18			0	21

MEDIVS MOTVS VENERIS AD DIES MENSIVM.

Die Menſis.	SEPTEMB.				OCTOBRIS				NOVEMB.				DECEMB.			
	Medius Motus Veneris.				*Medius Motus Veneris.*				*Medius Motus Veneris.*				*Medius Motus Veneris.*			
	s	°	'	''	s	°	'	''	s	°	'	''	s	°	'	''
1	1	0	55	44	2	18	59	38	4	8	39	40	5	26	43	34
2	1	2	31	52	2	20	35	46	4	10	15	48	5	28	19	42
3	1	4	7	59	2	22	11	54	4	11	51	55	5	29	55	50
4	1	5	44	7	2	23	48	1	4	13	28	3	6	1	31	57
5	1	7	20	15	2	25	24	9	4	15	4	11	6	3	8	5
6	1	8	56	23	2	27	0	17	4	16	40	19	6	4	44	13
7	1	10	32	31	2	28	36	25	4	18	16	27	6	6	20	21
8	1	12	8	38	3	0	12	33	4	19	52	34	6	7	56	29
9	1	13	44	46	3	1	48	40	4	21	28	42	6	9	32	36
10	1	15	20	54	3	3	24	48	4	23	4	50	6	11	8	44
11	1	16	57	2	3	5	0	56	4	24	40	58	6	12	44	52
12	1	18	33	10	3	6	37	4	4	26	17	6	6	14	21	0
13	1	20	9	18	3	8	13	12	4	27	53	13	6	15	57	8
14	1	21	45	25	3	9	49	19	4	29	29	21	6	17	33	15
15	1	23	21	33	3	11	25	27	5	1	5	29	6	19	9	23
16	1	24	57	41	3	13	1	35	5	2	41	37	6	20	45	31
17	1	26	33	49	3	14	37	43	5	4	17	45	6	22	21	39
18	1	28	9	57	3	16	13	51	5	5	53	52	6	23	57	47
19	1	29	46	4	3	17	49	58	5	7	30	0	6	25	33	54
20	2	1	22	12	3	19	26	6	5	9	6	8	6	27	10	2
21	2	2	58	20	3	21	2	14	5	10	42	16	6	28	46	10
22	2	4	34	28	3	22	38	22	5	12	18	24	7	0	22	18
23	2	6	10	36	3	24	14	30	5	13	54	32	7	1	58	26
24	2	7	46	43	3	25	50	37	5	15	30	39	7	3	34	33
25	2	9	22	51	3	27	26	45	5	17	6	47	7	5	10	41
26	2	10	58	59	3	29	2	53	5	18	42	55	7	6	46	49
27	2	12	35	7	4	0	39	1	5	20	19	3	7	8	22	57
28	2	14	11	15	4	2	15	9	5	21	55	11	7	9	59	5
29	2	15	47	22	4	3	51	16	5	23	31	18	7	11	35	12
30	2	17	23	30	4	5	27	24	5	25	7	26	7	13	11	20
31			'	''	4	7	3	32			'	''	7	14	47	28
	Mot.Aph.		0	42			0	47			0	52			0	56
	Mot.Nod.		0	23			0	26			0	28			0	31

MEDIVS MOTVS VENERIS AB ÆQVINOCTIO.

IN ANNORVM CENTVRIIS.

Annis Julian. Collect.	*Medius Motus Veneris.*				*Motus Aphel. Veneris.*				*Motus Nodi Veneris.*		
	s	°	′	″	s	°	′	″	°	′	″
100	6	19	11	52	0	1	34	13	0	51	40
200	1	8	23	44	0	3	8	27	1	43	20
300	7	27	35	36	0	4	42	40	2	35	0
400	2	16	47	28	0	6	16	53	3	26	40
500	9	5	59	20	0	7	51	7	4	18	20
600	3	25	11	12	0	9	25	20	5	10	0
700	10	14	23	4	0	10	59	33	6	1	40
800	5	3	34	56	0	12	33	47	6	53	20
900	11	22	46	48	0	14	8	0	7	45	0
1000	6	11	58	40	0	15	42	13	8	36	40
1100	1	1	10	32	0	17	16	27	9	28	20
1200	7	20	22	24	0	18	50	40	10	20	0
1300	2	9	34	16	0	20	24	53	11	11	40
1400	8	28	46	8	0	21	59	7	12	3	20
1500	3	17	58	0	0	23	33	20	12	55	0
1600	10	7	9	52	0	25	7	33	13	46	40
1700	4	26	21	44	0	26	41	47	14	38	20
1800	11	15	33	36	0	28	16	0	15	30	0
1900	6	4	45	28	0	29	50	13	16	21	40
2000	0	23	57	20	1	1	24	27	17	13	20
2100	7	13	9	12	1	2	58	40	18	5	0
2200	2	2	21	4	1	4	32	53	18	56	40
2300	8	21	32	56	1	6	7	7	19	48	20
2400	3	10	44	48	1	7	41	20	20	40	0
2500	9	29	56	40	1	9	15	33	21	31	40
2600	4	19	8	32	1	10	49	47	22	23	20
2700	11	8	20	24	1	12	24	0	23	15	0
2800	5	27	32	16	1	13	58	13	24	6	40
2900	0	16	44	8	1	15	32	27	24	58	20
3000	7	5	56	0	1	17	6	40	25	50	0
3100	1	25	7	52	1	18	40	53	26	41	40
3200	8	14	19	44	1	20	15	7	27	33	20

IN HORIS ET MIN.

Medius Motus Veneris.

″	″	‴	⁗	″	″	‴	⁗
′	′	″	‴	′	′	″	‴
H	°	′	″	H	°	′	″
1	0	4	0	31	2	4	10
2	0	8	1	32	2	8	10
3	0	12	1	33	2	12	10
4	0	16	1	34	2	16	11
5	0	20	2	35	2	20	11
6	0	24	2	36	2	24	11
7	0	28	2	37	2	28	12
8	0	32	3	38	2	32	12
9	0	36	3	39	2	36	12
10	0	40	3	40	2	40	13
11	0	44	4	41	2	44	13
12	0	48	4	42	2	48	13
13	0	52	4	43	2	52	14
14	0	56	4	44	2	56	14
15	1	0	5	45	3	0	14
16	1	4	5	46	3	4	15
17	1	8	5	47	3	8	15
18	1	12	6	48	3	12	16
19	1	16	6	49	3	16	16
20	1	20	6	50	3	20	16
21	1	24	7	51	3	24	16
22	1	28	7	52	3	28	17
23	1	32	7	53	3	32	17
24	1	36	8	54	3	36	17
25	1	40	8	55	3	40	18
26	1	44	8	56	3	44	18
27	1	48	9	57	3	48	18
28	1	52	9	58	3	52	19
29	1	56	9	59	3	56	19
30	2	0	10	60	4	0	19

TABVLA ÆQVATIONVM VENERIS.

Anomalia media Veneris.

	Sig. 0. *Subtr.*	Sig. I. *Subtr.*	Sig. II. *Subtr.*	Sig. III. *Subtr.*	Sig. IV. *Subtr.*	Sig. V. *Subtr.*	
Gr.	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	° ′ ″	
0	0 0 0	0 23 50	0 41 24	0 48 0	0 41 45	0 24 10	30
1	0 0 50	0 24 33	0 41 48	0 48 0	0 41 19	0 23 26	29
2	0 1 40	0 25 15	0 42 12	0 47 59	0 40 53	0 22 42	28
3	0 2 30	0 25 57	0 42 35	0 47 57	0 40 26	0 21 57	27
4	0 3 20	0 26 39	0 42 58	0 47 54	0 39 59	0 21 12	26
5	0 4 10	0 27 20	0 43 20	0 47 50	0 39 31	0 20 27	25
6	0 4 59	0 28 1	0 43 41	0 47 46	0 39 2	0 19 41	24
7	0 5 48	0 28 41	0 44 1	0 47 41	0 38 32	0 18 55	23
8	0 6 37	0 29 21	0 44 21	0 47 34	0 38 1	0 18 7	22
9	0 7 26	0 30 0	0 44 40	0 47 27	0 37 30	0 17 20	21
10	0 8 15	0 30 39	0 44 58	0 47 20	0 36 58	0 16 33	20
11	0 9 5	0 31 17	0 45 16	0 47 11	0 36 26	0 15 45	19
12	0 9 54	0 31 54	0 45 32	0 47 2	0 35 52	0 14 57	18
13	0 10 43	0 32 31	0 45 48	0 46 51	0 35 19	0 14 9	17
14	0 11 31	0 33 8	0 46 2	0 46 40	0 34 44	0 13 20	16
15	0 12 19	0 33 44	0 46 16	0 46 28	0 34 9	0 12 32	15
16	0 13 7	0 34 19	0 46 29	0 46 15	0 33 33	0 11 43	14
17	0 13 55	0 34 53	0 46 41	0 46 1	0 32 57	0 10 54	13
18	0 14 42	0 35 27	0 46 53	0 45 46	0 32 19	0 10 4	12
19	0 15 30	0 36 1	0 47 3	0 45 30	0 31 42	0 9 14	11
20	0 16 17	0 36 33	0 47 12	0 45 14	0 31 3	0 8 24	10
21	0 17 4	0 37 5	0 47 20	0 44 56	0 30 24	0 7 34	9
22	0 17 50	0 37 37	0 47 28	0 44 38	0 29 45	0 6 44	8
23	0 18 36	0 38 8	0 47 35	0 44 19	0 29 5	0 5 54	7
24	0 19 22	0 38 38	0 47 42	0 43 59	0 28 25	0 5 3	6
25	0 20 7	0 39 7	0 47 47	0 43 39	0 27 44	0 4 12	5
26	0 20 52	0 39 36	0 47 52	0 43 18	0 27 2	0 3 22	4
27	0 21 37	0 40 4	0 47 55	0 42 56	0 26 20	0 2 31	3
28	0 22 22	0 40 31	0 47 58	0 42 33	0 25 37	0 1 41	2
29	0 23 6	0 40 58	0 47 59	0 42 9	0 24 54	0 0 51	1
30	0 23 50	0 41 24	0 48 0	0 41 45	0 24 10	0 0 0	0
	Sig. XI. *Adde.*	Sig. X. *Adde.*	Sig. IX. *Adde.*	Sig. VIII. *Adde.*	Sig. VII. *Adde.*	Sig. VI. *Adde.*	*Gr.*

LOGARITHMI DISTANTIARUM VENERIS A SOLE.

Anomalia media Veneris.

Gr.	Sig. o	Sig. I.	Sig. II.	Sig. III.	Sig. IV.	Sig. V.	
	Logar.	*Logar.*	*Logar.*	*Logar.*	*Logar.*	*Logar.*	
0	4 862359	4 861961	4 860867	4 859359	4 857835	4 856709	30
1	4 862358	4 861934	4 860821	4 859306	4 857789	4 856683	29
2	4 862356	4 861907	4 860775	4 859253	4 857743	4 856657	28
3	4 862354	4 861879	4 860729	4 859200	4 857698	4 856632	27
4	4 862352	4 861850	4 860682	4 859147	4 857653	4 856608	26
5	4 862348	4 861821	4 860635	4 859094	4 857609	4 856585	25
6	4 862343	4 861791	4 860587	4 859041	4 857566	4 856563	24
7	4 862337	4 861760	4 860539	4 858989	4 857523	4 856541	23
8	4 862330	4 861728	4 860490	4 858936	4 857480	4 856520	22
9	4 862322	4 861696	4 860441	4 858884	4 857438	4 856501	21
10	4 862314	4 861663	4 860392	4 858831	4 857397	4 856482	20
11	4 862304	4 861629	4 860342	4 858879	4 857356	4 856464	19
12	4 862294	4 861594	4 860292	4 858727	4 857316	4 856447	18
13	4 862282	4 861559	4 860242	4 858675	4 857276	4 856431	17
14	4 862270	4 861523	4 860192	4 858623	4 857237	4 856415	16
15	4 862257	4 861486	4 860141	4 858572	4 857199	4 856401	15
16	4 862244	4 861449	4 860090	4 858521	4 857161	4 856387	14
17	4 862229	4 861411	4 860039	4 858470	4 857124	4 856375	13
18	4 862214	4 861373	4 859988	4 858419	4 857088	4 856363	12
19	4 862197	4 861334	4 859936	4 858368	4 857053	4 856352	11
20	4 862180	4 861294	4 859884	4 858318	4 857010	4 856342	10
21	4 862162	4 861254	4 859832	4 858268	4 856984	4 856333	9
22	4 862143	4 861213	4 859780	4 858218	4 856950	4 856325	8
23	4 862123	4 861172	4 859728	4 858169	4 856917	4 856318	7
24	4 862102	4 861130	4 859676	4 858120	4 856885	4 856312	6
25	4 862080	4 861087	4 859623	4 858072	4 856854	4 856307	5
26	4 862058	4 861044	4 859570	4 858024	4 856823	4 856303	4
27	4 862035	4 861000	4 859518	4 857976	4 856794	4 856299	3
28	4 862011	4 860956	4 859465	4 857928	4 856765	4 856297	2
29	4 861986	4 860912	4 859412	4 857881	4 856737	4 856295	1
30	4 861961	4 860867	4 859359	4 857835	4 856709	4 856295	0
	Sig. XI.	Sig. X.	Sig. IX.	Sig. VIII.	Sig. VII.	Sig. VI.	Gr.

TABULA LATITUDINARIA VENERIS.

Argument. Latitudinis.	Sig. 0. *Bor* Sig. 6. *Auſt* Inclinatio.			*Subtr.* *Subtr.* *Reduct.*		Curtatio	Sig. 1. *Bor.* Sig. 7. *Auſt.* Inclinatio.			*Subtr.* *Subtr.* *Reduct.*		Curtatio	Sig. 2. *Bor.* Sig. 8. *Auſt.* Inclinatio.			*Subtr.* *Subtr.* *Reduct.*		Curtatio	
Gr.	°	′	″	′	″	Log.	°	′	″	′	″	Log.	°	′	″	′	″	Log.	
0	0	0	0	0	0	0	1	41	37	2	36	190	2	56	4	2	36	570	30
1	0	3	33	0	6	0	1	44	41	2	39	201	2	57	49	2	32	581	29
2	0	7	6	0	13	1	1	47	42	2	42	213	2	59	30	2	29	592	28
3	0	10	38	0	19	2	1	50	42	2	44	225	3	1	9	2	26	603	27
4	0	14	11	0	25	4	1	53	39	2	47	237	3	2	44	2	22	614	26
5	0	17	42	0	31	6	1	56	35	2	49	250	3	4	16	2	18	624	25
6	0	21	14	0	37	8	1	59	28	2	51	262	3	5	44	2	14	634	24
7	0	24	46	0	43	11	2	2	19	2	53	275	3	7	9	2	9	644	23
8	0	28	17	0	50	15	2	5	8	2	54	288	3	8	30	2	5	653	22
9	0	31	48	0	56	19	2	7	55	2	56	301	3	9	49	2	0	662	21
10	0	35	17	1	1	23	2	10	39	2	57	314	3	11	3	1	56	671	20
11	0	38	46	1	7	28	2	13	21	2	58	327	3	12	14	1	51	679	19
12	0	42	15	1	13	33	2	16	1	2	59	340	3	13	22	1	46	687	18
13	0	45	43	1	19	38	2	18	38	2	59	353	3	14	26	1	41	695	17
14	0	49	10	1	24	44	2	21	12	3	0	366	3	15	27	1	35	702	16
15	0	52	36	1	30	51	2	23	44	3	0	380	3	16	24	1	30	709	15
16	0	56	1	1	35	58	2	26	13	3	0	393	3	17	17	1	24	716	14
17	0	59	25	1	41	65	2	28	40	2	59	406	3	18	6	1	19	721	13
18	1	2	48	1	46	72	2	31	4	2	59	420	3	18	53	1	13	727	12
19	1	6	10	1	51	80	2	33	25	2	58	433	3	19	35	1	7	732	11
20	1	9	30	1	56	89	2	35	43	2	57	446	3	20	14	1	1	737	10
21	1	12	50	2	0	97	2	37	59	2	56	459	3	20	50	0	56	741	9
22	1	16	8	2	5	106	2	40	12	2	54	472	3	21	21	0	50	745	8
23	1	19	24	2	9	116	2	42	21	2	53	485	3	21	49	0	43	749	7
24	1	22	40	2	14	125	2	44	28	2	51	497	3	22	13	0	37	752	6
25	1	25	54	2	18	135	2	46	32	2	49	510	3	22	33	0	31	754	5
26	1	29	5	2	22	146	2	48	32	2	47	522	3	22	50	0	25	756	4
27	1	32	16	2	26	156	2	50	30	2	44	534	3	23	3	0	19	758	3
28	1	35	25	2	29	167	2	52	24	2	42	546	3	23	12	0	13	759	2
29	1	38	32	2	32	178	2	54	15	2	39	558	3	23	18	0	6	760	1
30	1	41	37	2	36	190	2	56	4	2	36	570	3	23	20	0	0	760	0
	Sig. 11. *Auſt.* Sig. 5. *Bor.*			*Adde.* *Adde.*			Sig. 10. *Auſt.* Sig. 4. *Bor.*			*Adde.* *Adde.*			Sig. 9. *Auſt.* Sig. 3. *Bor.*			*Adde.* *Adde.*			Gr.

EPOCHÆ MEDIORUM MOTUUM MARTIS.

Annis Julianis ineuntibus.	*Mars ab Æquinoct.*	*Aphel.* ♂ ♌ 29°	*Nod.* ♂ ♉ 17°	*Annis Julianis ineuntibus.*	*Mars ab Æquinoct.*	*Aphel.* ♂ ♍ 0°	*Nod.* ♂ ♉ 17°
	s ° ′ ″	° ′ ″	′ ″		s ° ′ ″	° ′ ″	′ ″
1661	9 1 45 22	47 50	0 0	1696	4 10 57 36	28 40	22 10
62	3 13 2 32	49 0	0 38	97	10 22 46 12	29 50	22 48
63	9 24 19 41	50 10	1 16	98	5 4 3 22	31 0	23 26
64	4 5 36 51	51 20	1 54	99	11 15 20 32	32 10	24 4
1665	10 17 25 27	52 30	2 32	1700	5 26 37 42	33 20	24 42
1666	4 28 42 37	53 40	3 10	1701	0 8 26 18	34 30	25 20
67	11 9 59 47	54 50	3 48	2	6 19 43 28	35 40	25 58
68	5 21 16 57	56 0	4 26	3	1 1 0 37	36 50	26 36
69	0 3 5 33	57 10	5 4	4	7 12 17 47	38 0	27 14
1670	6 14 22 43	58 20	5 42	1705	1 24 6 24	39 10	27 52
1671	0 25 39 53	59 30	6 20	1706	8 5 23 34	40 20	28 30
72	7 6 57 2	0 0 40	6 58	7	2 16 40 43	41 30	29 8
73	1 18 45 39	♍ 1 50	7 36	8	8 27 57 53	42 40	29 46
74	8 0 2 48	3 0	8 14	9	3 9 46 29	43 50	30 24
1675	2 11 19 58	4 10	8 52	1710	9 21 3 39	45 0	31 2
1676	8 22 37 8	5 20	9 30	1711	4 2 20 49	46 10	31 40
77	3 4 25 44	6 30	10 8	12	10 13 37 58	47 20	32 18
78	9 15 42 54	7 40	10 46	13	4 25 26 35	48 30	32 56
79	3 27 0 4	8 50	11 24	14	11 6 43 44	49 40	33 34
1680	10 8 17 14	10 0	12 2	1715	5 18 0 54	50 50	34 12
1681	4 20 5 50	11 10	12 40	1716	11 29 18 4	52 0	34 50
82	11 1 23 0	12 20	13 18	17	6 11 6 40	53 10	35 28
83	5 12 40 10	13 30	13 56	18	0 22 23 50	54 20	36 6
84	11 23 57 19	14 40	14 34	19	7 3 41 0	55 30	36 44
1685	6 5 45 56	15 50	15 12	1720	1 14 58 10	56 40	37 22
1686	0 17 3 6	17 0	15 50	1721	7 26 46 46	57 50	38 0
87	6 28 20 15	18 10	16 28	22	2 8 3 56	59 0	38 38
88	1 9 37 25	19 20	17 6	23	8 19 21 6	1 0 10	39 16
89	7 21 26 1	20 30	17 44	24	3 0 38 15	♍ 1 20	39 54
1690	2 2 43 11	21 40	18 22	1725	9 12 26 51	2 30	40 32
1691	8 14 0 21	22 50	19 0	1726	3 23 44 1	3 40	41 10
92	2 25 17 31	24 0	19 38	27	10 5 1 11	4 50	41 48
93	9 7 6 7	25 10	20 16	28	4 16 18 21	6 0	42 26
94	3 18 23 17	26 20	20 54	29	10 28 6 57	7 10	43 4
1695	9 29 40 27	27 30	21 32	1730	5 9 24 7	8 20	43 42

EPOCHÆ MEDIORUM MOTUUM MARTIS.

Annis Julianis ineuntibus.	*Mars ab Æquinoct*				*Aph.* ♂ ♍ 1°		*Nodus* ♂ ♉ 17°			*Annis Julianis ineuntibus.*	*Mars ab Æquinoct.*				*Aphel.* ♂ ♍ 1°			*Nod.* ♂ ♉ 18°	
	s	°	′	″	′	″	°	′	″		s	°	′	″	°	′	″	′	″
1731	11	20	41	17	9	30		44	20	1766	7	0	24	57		50	20	6	30
32	6	1	58	27	10	40		44	58	67	1	11	42	7		51	30	7	8
33	0	13	47	3	11	50		45	36	68	7	22	59	17		52	40	7	46
34	6	25	4	13	13	0		46	14	69	2	4	47	53		53	50	8	24
1735	1	6	21	23	14	10		46	52	1770	8	16	5	3		55	0	9	2
1736	7	17	38	32	15	20		47	30	1771	2	27	22	13		56	10	9	40
37	1	29	27	8	16	30		48	8	72	9	8	39	23		57	20	10	18
38	8	10	44	18	17	40		48	46	73	3	20	27	59		58	30	10	56
39	2	22	1	28	18	50		49	24	74	10	1	45	9		59	40	11	34
1740	9	3	18	38	20	0		50	2	1775	4	13	2	19	2	0	50	12	12
1741	3	15	7	14	21	10		50	40	1776	10	24	19	29		2	0	12	50
42	9	26	24	24	22	20		51	18	77	5	6	8	5		3	10	13	28
43	4	7	41	34	23	30		51	56	78	11	17	25	14		4	20	14	6
44	10	18	58	43	24	40		52	34	79	5	28	42	24		5	30	14	44
1745	5	0	47	19	25	50		53	12	1780	0	9	59	34		6	40	15	22
1746	11	12	4	29	27	0		53	50	1781	6	21	48	10		7	50	16	0
47	5	23	21	39	28	10		54	28	82	1	3	5	20		9	0	16	38
48	0	4	38	49	29	20		55	6	83	7	14	22	30		10	10	17	16
49	6	16	27	25	30	30		55	44	84	1	25	39	40		11	20	17	54
1750	0	27	44	35	31	40		56	22	1785	8	7	28	16		12	30	18	32
1751	7	9	1	45	32	50		57	0	1786	2	18	45	26		13	40	19	10
52	1	20	18	55	34	0		57	38	87	9	0	2	36		14	50	19	48
53	8	2	7	31	35	10		58	16	88	3	11	19	46		16	0	20	26
54	2	13	24	41	36	20		58	54	89	9	23	8	22		17	10	21	4
1755	8	24	41	51	37	30		59	32	1790	4	4	25	31		18	20	21	42
1756	3	5	59	0	38	40	18	0	10	1791	10	15	42	41		19	30	22	20
57	9	17	47	36	39	50	♉	0	48	92	4	26	59	51		20	40	22	58
58	3	29	4	46	41	0		1	26	93	11	8	48	27		21	50	23	36
59	10	10	21	56	42	10		2	4	94	5	20	5	37		23	0	24	14
1760	4	21	39	6	43	20		2	42	1795	0	1	22	47		24	10	24	52
1761	11	3	27	42	44	30		3	20	1796	6	12	39	56		25	20	25	30
62	5	14	44	52	45	40		3	58	97	0	24	28	32		26	30	26	8
63	11	26	2	2	46	50		4	36	98	7	5	45	42		27	40	26	46
64	6	7	19	12	48	0		5	14	99	1	17	2	52		28	50	27	24
1765	0	19	7	48	49	10		5	52	1800	7	28	20	2		30	0	28	2

MEDIUS MOTUS MARTIS AD DIES MENSIUM.

Die Menſis.	JANUARII				FEBRUARII				MARTII				APRILIS			
	Medius Motus Martis.				*Medius Motus Martis.*				*Medius Motus Martis.*				*Medius Motus Martis.*			
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″
1	0	0	31	27	0	16	46	13	1	1	26	39	1	17	41	26
2	0	1	2	54	0	17	17	40	1	1	58	6	1	18	12	52
3	0	1	34	20	0	17	49	6	1	2	29	33	1	18	44	19
4	0	2	5	47	0	18	20	33	1	3	0	59	1	19	15	46
5	0	2	37	13	0	18	52	0	1	3	32	26	1	19	47	12
6	0	3	8	40	0	19	23	26	1	4	3	53	1	20	18	39
7	0	3	40	7	0	19	54	53	1	4	35	19	1	20	50	6
8	0	4	11	33	0	20	26	20	1	5	6	46	1	21	21	32
9	0	4	43	0	0	20	57	46	1	5	38	13	1	21	52	59
10	0	5	14	27	0	21	29	13	1	6	9	39	1	22	24	26
11	0	5	45	53	0	22	0	40	1	6	41	6	1	22	55	52
12	0	6	17	20	0	22	32	6	1	7	12	33	1	23	27	19
13	0	6	48	47	0	23	3	33	1	7	43	59	1	23	58	46
14	0	7	20	13	0	23	35	0	1	8	15	26	1	24	30	12
15	0	7	51	40	0	24	6	26	1	8	46	53	1	25	1	39
16	0	8	23	6	0	24	37	53	1	9	18	19	1	25	33	6
17	0	8	54	33	0	25	9	19	1	9	49	46	1	26	4	32
18	0	9	26	0	0	25	40	46	1	10	21	12	1	26	35	59
19	0	9	57	26	0	26	12	13	1	10	52	39	1	27	7	26
20	0	10	28	53	0	26	43	39	1	11	24	5	1	27	38	52
21	0	11	0	20	0	27	15	6	1	11	55	32	1	28	10	19
22	0	11	31	46	0	27	46	33	1	12	26	59	1	28	41	46
23	0	12	3	13	0	28	17	59	1	12	58	26	1	29	13	12
24	0	12	34	40	0	28	49	26	1	13	29	52	1	29	44	39
25	0	13	6	6	0	29	20	53	1	14	1	19	2	0	16	6
26	0	13	37	33	0	29	52	19	1	14	32	46	2	0	47	32
27	0	14	9	0	1	0	23	46	1	15	4	12	2	1	18	59
28	0	14	40	26	1	0	55	13	1	15	35	39	2	1	50	26
29	0	15	11	53	*In Anno* Biſſextili *poſt* Februarium *adde unius diei motum.*				1	16	7	5	2	2	21	52
30	0	15	43	20					1	16	38	32	2	2	53	19
31	0	16	14	46			′	″	1	17	9	59			′	″
Motus Aphelii			0	6			0	12			0	18			0	23
Motus Nodi			0	3			0	6			0	10			0	13

MEDIVS MOTVS MARTIS AD DIES MENSIVM.

Die Menſis.	MAII				JUNII				JULII				AUGUSTI			
	Medius Motus Martis.				*Medius Motus Martis.*				*Medius Motus Martis.*				*Medius Motus Martis.*			
	s	°	'	"	s	°	'	"	s	°	'	"	s	°	'	"
1	2	3	24	46	2	19	39	33	3	5	22	51	3	21	37	38
2	2	3	56	13	2	20	10	59	3	5	54	18	3	22	9	4
3	2	4	27	40	2	20	42	26	3	6	25	45	3	22	40	31
4	2	4	59	6	2	21	13	53	3	6	57	11	3	23	11	58
5	2	5	30	33	2	21	45	19	3	7	28	38	3	23	43	24
6	2	6	2	0	2	22	16	46	3	8	0	5	3	24	14	51
7	2	6	33	26	2	22	48	13	3	8	31	32	3	24	46	18
8	2	7	4	53	2	23	19	39	3	9	2	58	3	25	17	44
9	2	7	36	20	2	23	51	6	3	9	34	25	3	25	49	11
10	2	8	7	46	2	24	22	33	3	10	5	51	3	26	20	37
11	2	8	39	13	2	24	53	59	3	10	37	18	3	26	52	4
12	2	9	10	40	2	25	25	26	3	11	8	44	3	27	23	31
13	2	9	42	6	2	25	56	53	3	11	40	11	3	27	54	58
14	2	10	13	33	2	26	28	19	3	12	11	38	3	28	26	24
15	2	10	45	0	2	26	59	46	3	12	43	4	3	28	57	51
16	2	11	16	26	2	27	31	13	3	13	14	31	3	29	29	17
17	2	11	47	53	2	28	2	39	3	13	45	58	4	0	0	44
18	2	12	19	20	2	28	34	5	3	14	17	24	4	0	32	11
19	2	12	50	46	2	29	5	32	3	14	48	51	4	1	3	37
20	2	13	22	13	2	29	36	59	3	15	20	18	4	1	35	4
21	2	13	53	40	3	0	8	25	3	15	51	44	4	2	6	30
22	2	14	25	6	3	0	39	52	3	16	23	11	4	2	37	57
23	2	14	56	33	3	1	11	18	3	16	54	38	4	3	9	24
24	2	15	27	59	3	1	42	45	3	17	26	4	4	3	40	50
25	2	15	59	26	3	2	14	12	3	17	57	31	4	4	12	17
26	2	16	30	53	3	2	45	38	3	18	28	58	4	4	43	44
27	2	17	2	19	3	3	17	5	3	19	0	24	4	5	15	10
28	2	17	33	46	3	3	48	32	3	19	31	51	4	5	46	37
29	2	18	5	13	3	4	19	59	3	20	3	18	4	6	18	4
30	2	18	36	39	3	4	51	25	3	20	34	44	4	6	49	30
31	2	19	8	6			'	"	3	21	6	11	4	7	20	57
Motus Aphelii			0	29			0	35			0	41			0	47
Motus Nodi			0	16			0	19			0	22			0	25

MEDIVS MOTVS MARTIS
AD DIES MENSIVM.

Die Menſis.	SEPTEMB.				OCTOBRIS				NOVEMB.				DECEMB.			
	Medius Motus Martis.				*Medius Motus Martis.*				*Medius Motus Martis.*				*Medius Motus Martis.*			
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″
1	4	7	52	25	4	23	35	44	5	9	50	31	5	25	33	50
2	4	8	23	51	4	24	7	11	5	10	21	57	5	26	5	17
3	4	8	55	18	4	24	38	38	5	10	53	24	5	26	36	44
4	4	9	26	45	4	25	10	4	5	11	24	51	5	27	8	10
5	4	9	58	11	4	25	41	31	5	11	56	17	5	27	39	37
6	4	10	29	38	4	26	12	58	5	12	27	44	5	28	11	4
7	4	11	1	5	4	26	44	24	5	12	59	11	5	28	42	30
8	4	11	32	31	4	27	15	51	5	13	30	37	5	29	13	57
9	4	12	3	58	4	27	47	18	5	14	2	4	5	29	45	23
10	4	12	35	25	4	28	18	44	5	14	33	30	6	0	16	50
11	4	13	6	51	4	28	50	11	5	15	4	57	6	0	48	17
12	4	13	38	18	4	29	21	38	5	15	36	24	6	1	19	43
13	4	14	9	45	4	29	53	4	5	16	7	50	6	1	51	10
14	4	14	41	11	5	0	24	31	5	16	39	17	6	2	22	37
15	4	15	12	38	5	0	55	57	5	17	10	43	6	2	54	3
16	4	15	44	4	5	1	27	24	5	17	42	10	6	3	25	30
17	4	16	15	31	5	1	58	51	5	18	13	37	6	3	56	57
18	4	16	46	58	5	2	30	17	5	18	45	4	6	4	28	23
19	4	17	18	24	5	3	1	44	5	19	16	30	6	4	59	50
20	4	17	49	51	5	3	33	11	5	19	47	57	6	5	31	17
21	4	18	21	18	5	4	4	37	5	20	19	24	6	6	2	43
22	4	18	52	44	5	4	36	4	5	20	50	50	6	6	34	10
23	4	19	24	11	5	5	7	31	5	21	22	17	6	7	5	37
24	4	19	55	38	5	5	38	57	5	21	53	44	6	7	37	3
25	4	20	27	4	5	6	10	24	5	22	25	10	6	8	8	30
26	4	20	58	31	5	6	41	51	5	22	56	37	6	8	39	57
27	4	21	29	58	5	7	13	17	5	23	28	4	6	9	11	23
28	4	22	1	24	5	7	44	44	5	23	59	30	6	9	42	50
29	4	22	32	51	5	8	16	11	5	24	30	57	6	10	14	17
30	4	23	4	18	5	8	47	37	5	25	2	24	6	10	45	43
31			′	″	5	9	19	4			′	″	6	11	17	10
Motus Aphelii			0	53			0	58			1	4			1	10
Motus Nodi			0	28			0	32			0	35			0	38

MEDII MOTVS MARTIS AB ÆQVINOCTIO.

IN ANNORVM CENTVRIIS.

Annis Julian. Collect.	*Medius Motus Martis.*				*Motus Aphel. Martis.*				*Motus Nodi Martis.*			
	s	°	′	″	s	°	′	″	s	°	′	″
100	2	1	42	20	0	1	56	40	0	1	3	20
200	4	3	24	40	0	3	53	20	0	2	6	40
300	6	5	7	0	0	5	50	0	0	3	10	0
400	8	6	49	20	0	7	46	40	0	4	13	20
500	10	8	31	40	0	9	43	20	0	5	16	40
600	0	10	14	0	0	11	40	0	0	6	20	0
700	2	11	56	20	0	13	36	40	0	7	23	20
800	4	13	38	40	0	15	33	20	0	8	26	40
900	6	15	21	0	0	17	30	0	0	9	30	0
1000	8	17	3	20	0	19	26	40	0	10	33	20
1100	10	18	45	40	0	21	23	20	0	11	36	40
1200	0	20	28	0	0	23	20	0	0	12	40	0
1300	2	22	10	20	0	25	16	40	0	13	43	20
1400	4	23	52	40	0	27	13	20	0	14	46	40
1500	6	25	35	0	0	29	10	0	0	15	50	0
1600	8	27	17	20	1	1	6	40	0	16	53	20
1700	10	28	59	40	1	3	3	20	0	17	56	40
1800	1	0	42	0	1	5	0	0	0	19	0	0
1900	3	2	24	20	1	6	56	40	0	20	3	20
2000	5	4	6	40	1	8	53	20	0	21	6	40
2100	7	5	49	0	1	10	50	0	0	22	10	0
2200	9	7	31	20	1	12	46	40	0	23	13	20
2300	11	9	13	40	1	14	43	20	0	24	16	40
2400	1	10	56	0	1	16	40	0	0	25	20	0
2500	3	12	38	20	1	18	36	40	0	26	23	20
2600	5	14	20	40	1	20	33	20	0	27	26	40
2700	7	16	3	0	1	22	30	0	0	28	30	0
2800	9	17	45	20	1	24	26	40	0	29	33	20
2900	11	19	27	40	1	26	23	20	1	0	36	40
3000	1	21	10	0	1	28	20	0	1	1	40	0
3100	3	22	52	20	2	0	16	40	1	2	43	20
3200	5	24	34	40	2	2	13	20	1	3	46	40

IN HORIS ET MIN.

Medius Motus Martis.							
″	″	‴	⁗	″	″	‴	⁗
′	′	″	‴	′	′	″	‴
H	°	′	″	H	°	′	″
1	0	1	19	31	0	40	37
2	0	2	37	32	0	41	56
3	0	3	56	33	0	43	14
4	0	5	14	34	0	44	33
5	0	6	33	35	0	45	51
6	0	7	52	36	0	47	10
7	0	9	10	37	0	48	29
8	0	10	29	38	0	49	47
9	0	11	48	39	0	51	6
10	0	13	6	40	0	52	24
11	0	14	25	41	0	53	43
12	0	15	43	42	0	55	2
13	0	17	2	43	0	56	20
14	0	18	21	44	0	57	39
15	0	19	39	45	0	58	58
16	0	20	58	46	1	0	16
17	0	22	16	47	1	1	35
18	0	23	35	48	1	2	53
19	0	24	54	49	1	4	12
20	0	26	12	50	1	5	31
21	0	27	31	51	1	6	49
22	0	28	49	52	1	8	8
23	0	30	8	53	1	9	26
24	0	31	27	54	1	10	45
25	0	32	45	55	1	12	4
26	0	34	4	56	1	13	22
27	0	35	22	57	1	14	41
28	0	36	41	58	1	15	59
29	0	38	0	59	1	17	18
30	0	39	18	60	1	18	37

TABULA ÆQUATIONUM MARTIS.

Anomalia media Martis.

	Sig. 0. *Subtr.*			*Differentia*		Sig. I. *Subtr.*			*Differentia.*		Sig. II. *Subtr*			*Differentia.*		
Gr.	°	′	″	′	″	°	′	″	′	″	°	′	″	′	″	
0	0	0	0			4	50	1			8	41	16			30
1	0	10	0	10	0	4	59	0	8	59	8	47	17	6	1	29
2	0	19	59	9	59	5	7	55	8	55	8	53	10	5	53	28
3	0	29	58	9	59	5	16	46	8	51	8	58	54	5	44	27
4	0	39	57	9	59	5	25	32	8	46	9	4	30	5	36	26
5	0	49	55	9	58	5	34	14	8	42	9	9	58	5	28	25
6	0	59	53	9	58	5	42	51	8	37	9	15	18	5	20	24
7	1	9	50	9	57	5	51	24	8	33	9	20	29	5	11	23
8	1	19	46	9	56	5	59	52	8	28	9	25	31	5	2	22
9	1	29	41	9	55	6	8	15	8	23	9	30	24	4	53	21
10	1	39	35	9	54	6	16	33	8	18	9	35	9	4	45	20
11	1	49	27	9	52	6	24	45	8	12	9	39	45	4	36	19
12	1	59	18	9	51	6	32	52	8	7	9	44	11	4	26	18
13	2	9	7	9	49	6	40	53	8	1	9	48	28	4	17	17
14	2	18	55	9	48	6	48	49	7	56	9	52	36	4	8	16
15	2	28	41	9	46	6	56	40	7	51	9	56	34	3	58	15
16	2	38	25	9	44	7	4	25	7	45	10	0	22	3	48	14
17	2	48	7	9	42	7	12	4	7	39	10	4	0	3	38	13
18	2	57	46	9	39	7	19	36	7	32	10	7	29	3	29	12
19	3	7	23	9	37	7	27	2	7	26	10	10	48	3	19	11
20	3	16	59	9	36	7	34	22	7	20	10	13	57	3	9	10
21	3	26	31	9	32	7	41	35	7	13	10	16	55	2	58	9
22	3	36	0	9	29	7	48	41	7	6	10	19	43	2	48	8
23	3	45	27	9	27	7	55	40	6	59	10	22	21	2	38	7
24	3	54	50	9	23	8	2	33	6	53	10	24	49	2	28	6
25	4	4	10	9	20	8	9	18	6	45	10	27	6	2	17	5
26	4	13	28	9	18	8	15	57	6	39	10	29	12	2	6	4
27	4	22	42	9	14	8	22	28	6	31	10	31	7	1	55	3
28	4	31	52	9	10	8	28	52	6	23	10	32	51	1	44	2
29	4	40	58	9	6	8	35	8	6	16	10	34	24	1	33	1
30	4	50	1	9	3	8	41	16	6	8	10	35	46	1	22	0
	Sig. XI. *Adde.*			*Diff*		Sig. X. *Adde.*			*Diff.*		Sig. IX. *Adde.*			*Diff.*		*Gr.*

TABVLA ÆQVATIONVM MARTIS.

Anomalia media Martis.

	Sig. III. *Subtr.*	*Differentia.*	Sig. IV. *Subtr.*	*Differentia.*	Sig. V. *Subtr.*	*Differentia.*	
Gr.	° ′ ″	′ ″	° ′ ″	′ ″	° ′ ″	′ ″	
0	10 35 46		9 44 59		5 54 42		30
1	10 36 57	1 11	9 40 7	4 52	5 44 20	10 22	29
2	10 37 57	1 0	9 35 2	5 5	5 33 50	10 30	28
3	10 38 45	0 48	9 29 45	5 17	5 23 11	10 39	27
4	10 39 21	0 36	9 24 16	5 29	5 12 24	10 47	26
5	10 39 46	0 25	9 18 34	5 42	5 1 29	10 55	25
6	10 40 0	0 14	9 12 40	5 54	4 50 27	11 2	24
7	10 40 2	0 2	9 6 35	6 5	4 39 18	11 9	23
8	10 39 52	0 10	9 0 18	6 17	4 28 2	11 16	22
9	10 39 30	0 22	8 53 50	6 28	4 16 39	11 23	21
10	10 38 57	0 33	8 47 10	6 40	4 5 10	11 29	20
11	10 38 12	0 45	8 40 17	6 53	3 53 34	11 36	19
12	10 37 14	0 58	8 33 11	7 6	3 41 52	11 42	18
13	10 36 4	1 10	8 25 55	7 16	3 30 5	11 47	17
14	10 34 43	1 21	8 18 27	7 28	3 18 11	11 54	16
15	10 33 9	1 34	8 10 47	7 40	3 6 13	11 58	15
16	10 31 22	1 47	8 2 56	7 51	2 54 11	12 2	14
17	10 29 24	1 58	7 54 53	8 3	2 42 4	12 7	13
18	10 27 14	2 10	7 46 40	8 13	2 29 51	12 13	12
19	10 24 51	2 23	7 38 16	8 24	2 17 35	12 16	11
20	10 22 15	2 36	7 29 42	8 34	2 5 16	12 19	10
21	10 19 27	2 48	7 20 57	8 45	1 52 54	12 22	9
22	10 16 27	3 0	7 12 2	8 55	1 40 29	12 25	8
23	10 13 15	3 12	7 2 56	9 6	1 28 2	12 27	7
24	10 9 50	3 25	6 53 39	9 17	1 15 32	12 30	6
25	10 6 13	3 37	6 44 13	9 26	1 3 0	12 32	5
26	10 2 23	3 50	6 34 38	9 35	0 50 26	12 34	4
27	9 58 21	4 2	6 24 53	9 45	0 37 51	12 35	3
28	9 54 6	4 15	6 14 58	9 55	0 25 14	12 37	2
29	9 49 39	4 27	6 4 54	10 4	0 12 37	12 37	1
30	9 44 59	4 40	5 54 42	10 12	0 0 0	12 37	0
	Sig.VIII. *Adde.*	*Diff.*	Sig. VII *Adde.*	*Diff.*	Sig. VI. *Adde.*	*Diff.*	*Gr.*

LOGARITHMI DISTANTIARVM MARTIS A SOLE.

Anomalia media Martis.

Gr.	Sig. o. Logar.	Differentia.	Sig. I. Logar.	Differentia.	Sig. II. Logar.	Differentia.	
0	5 221516		5 217310		5 205134		30
1	5 221511	5	5 217027	283	5 204606	528	29
2	5 221497	14	5 216735	292	5 204070	536	28
3	5 221473	24	5 216435	300	5 203527	543	27
4	5 221441	32	5 216126	309	5 202977	550	26
5	5 221398	43	5 215808	318	5 202421	556	25
6	5 221346	52	5 215481	327	5 201857	564	24
7	5 221285	61	5 215145	336	5 201287	570	23
8	5 221215	70	5 214801	344	5 200711	576	22
9	5 221135	80	5 214448	353	5 200128	583	21
10	5 221046	89	5 214087	361	5 199538	590	20
11	5 220947	99	5 213717	370	5 198942	596	19
12	5 220839	108	5 213338	379	5 198340	602	18
13	5 220721	118	5 212951	387	5 197732	608	17
14	5 220594	127	5 212556	395	5 197118	614	16
15	5 220458	136	5 212152	404	5 196499	619	15
16	5 220313	145	5 211740	412	5 195874	625	14
17	5 220158	155	5 211319	421	5 195244	630	13
18	5 219994	164	5 210890	429	5 194608	636	12
19	5 219821	173	5 210453	437	5 193967	641	11
20	5 219639	182	5 210009	444	5 193322	645	10
21	5 219447	192	5 209556	453	5 192671	651	9
22	5 219245	202	5 209095	461	5 192015	656	8
23	5 219035	210	5 208627	468	5 191355	660	7
24	5 218817	218	5 208152	475	5 190690	665	6
25	5 218588	229	5 207668	484	5 190021	669	5
26	5 218351	237	5 207175	493	5 189347	674	4
27	5 218104	247	5 206674	501	5 188670	677	3
28	5 217848	256	5 206167	507	5 187989	681	2
29	5 217583	265	5 205654	513	5 187304	685	1
30	5 217310	273	5 205134	520	5 186615	689	0
	Sig. XI.	Diff.	Sig. X.	Diff.	Sig. IX.	Diff.	Gr.

LOGARITHMI DISTANTIARVM MARTIS A SOLE.

Anomalia media Martis.

Gr.	Sig. III. *Logar.*	*Differentia.*	Sig. IV. *Logar.*	*Differentia.*	Sig. V. *Logar.*	*Differentia*	
0	5 186615		5 165366		5 147586		30
1	5 185924	691	5 164676	690	5 147142	444	29
2	5 185229	695	5 163990	686	5 146710	432	28
3	5 184531	698	5 163309	681	5 146291	419	27
4	5 183831	700	5 162632	677	5 145885	406	26
5	5 183128	703	5 161960	672	5 145492	393	25
6	5 182423	705	5 161293	667	5 145113	379	24
7	5 181716	707	5 160631	662	5 144747	366	23
8	5 181006	710	5 159975	656	5 144395	352	22
9	5 180295	711	5 159325	650	5 144057	338	21
10	5 179582	713	5 158682	643	5 143734	323	20
11	5 178868	714	5 158045	637	5 143425	309	19
12	5 178153	715	5 157415	630	5 143131	294	18
13	5 177437	716	5 156792	623	5 142852	279	17
14	5 176721	716	5 156177	615	5 142587	265	16
15	5 176004	717	5 155570	607	5 142338	249	15
16	5 175287	717	5 154971	599	5 142104	234	14
17	5 174570	717	5 154380	591	5 141886	218	13
18	5 173853	717	5 153797	583	5 141683	203	12
19	5 173137	716	5 153223	574	5 141496	187	11
20	5 172421	716	5 152659	564	5 141325	171	10
21	5 171706	715	5 152104	555	5 141170	155	9
22	5 170992	714	5 151559	545	5 141031	139	8
23	5 170281	711	5 151024	535	5 140908	123	7
24	5 169572	709	5 150500	524	5 140801	107	6
25	5 168865	707	5 149986	514	5 140711	90	5
26	5 168160	705	5 149483	503	5 140637	74	4
27	5 167457	703	5 148991	492	5 140579	58	3
28	5 166756	701	5 148511	480	5 140538	41	2
29	5 166058	698	5 148043	468	5 140513	25	1
30	5 165366	692	5 147586	457	5 140505	8	0
	Sig. VIII.	*Diff.*	Sig. VII.	*Diff.*	Sig. VI.	*Diff.*	*Gr.*

TABVLA LATITVDINARIA MARTIS.

Argument. Latitudinis.	Sig. 0. Bor. Sig. 6. Auſt. Inclinatio.			Subtr. Subtr. Reduct.		Curtatio	Sig. 1. Bor. Sig. 7. Auſt. Inclinatio.			Subtr. Subtr. Reduct.		Curtatio	Sig. 2. Bor. Sig. 8. Auſt. Inclinatio.			Subtr. Subtr. Reduct.		Curtatio	
Gr.	°	′	″	′	″	Log.	°	′	″	′	″	Log.	°	′	″	′	″	Log.	
0	0	0	0	0	0	0	0	55	29	0	47	56	1	36	8	0	47	170	30
1	0	1	56	0	2	0	0	57	10	0	48	60	1	37	5	0	46	173	29
2	0	3	53	0	4	0	0	58	49	0	49	64	1	38	0	0	45	176	28
3	0	5	48	0	6	1	1	0	27	0	49	67	1	38	54	0	44	180	27
4	0	7	44	0	7	1	1	2	4	0	50	71	1	39	46	0	43	183	26
5	0	9	40	0	9	2	1	3	40	0	51	74	1	40	36	0	41	186	25
6	0	11	36	0	11	2	1	5	14	0	51	78	1	41	24	0	40	189	24
7	0	13	32	0	13	3	1	6	48	0	52	82	1	42	10	0	39	192	23
8	0	15	27	0	15	4	1	8	20	0	52	86	1	42	55	0	37	195	22
9	0	17	22	0	17	5	1	9	51	0	53	90	1	43	38	0	36	197	21
10	0	19	16	0	18	7	1	11	20	0	53	93	1	44	18	0	35	200	20
11	0	21	10	0	20	8	1	12	49	0	53	97	1	44	57	0	33	202	19
12	0	23	4	0	22	10	1	14	16	0	54	101	1	45	34	0	32	205	18
13	0	24	58	0	24	11	1	15	42	0	54	105	1	46	9	0	30	207	17
14	0	26	51	0	25	13	1	17	6	0	54	109	1	46	42	0	29	209	16
15	0	28	43	0	27	15	1	18	29	0	54	113	1	47	13	0	27	211	15
16	0	30	35	0	29	17	1	19	50	0	54	117	1	47	42	0	25	213	14
17	0	32	27	0	30	19	1	21	10	0	54	121	1	48	9	0	24	215	13
18	0	34	18	0	32	22	1	22	29	0	54	125	1	48	35	0	22	217	12
19	0	36	8	0	33	24	1	23	46	0	53	129	1	48	58	0	20	218	11
20	0	37	57	0	35	27	1	25	1	0	53	133	1	49	19	0	18	220	10
21	0	39	46	0	36	29	1	26	15	0	53	137	1	49	38	0	17	221	9
22	0	41	34	0	37	32	1	27	28	0	52	141	1	49	55	0	15	222	8
23	0	43	22	0	39	34	1	28	38	0	52	144	1	50	10	0	13	223	7
24	0	45	8	0	40	37	1	29	48	0	51	148	1	50	23	0	11	224	6
25	0	46	54	0	41	40	1	30	55	0	51	152	1	50	35	0	9	225	5
26	0	48	39	0	43	43	1	32	1	0	50	155	1	50	44	0	7	225	4
27	0	50	23	0	44	47	1	33	5	0	49	159	1	50	51	0	6	226	3
28	0	52	6	0	45	50	1	34	7	0	49	163	1	50	56	0	4	226	2
29	0	53	48	0	46	53	1	35	8	0	48	166	1	50	59	0	2	226	1
30	0	55	29	0	47	56	1	36	8	0	47	170	1	51	0	0	0	226	0
	Sig. 11. Auſt. Sig. 5. Bor.			Adde. Adde.			Sig. 10. Auſt. Sig. 4. Bor.			Adde. Adde.			Sig. 9. Auſt. Sig. 3. Bor.			Adde. Adde.			Gr.

SERIES OPPOSITIONUM SOLIS ET MARTIS NOSTRA ÆTATE FACTARUM CUM COMPUTO PRÆCEDENTE COLLATA.

Oppoſitionum Tempora æquata Londini.					*Locus Solis verus.*				*Anom. med. Martis.*				*Mars Heliocentricus comp.*				*Error Comp.*	
		D.	*H.*	′		°	′	″	S	°	′	″		°	′	″	′	″
1657	*Sept.*	27	11	11	♎	15	3	36	7	8	5	51	♈	15	3	36	*	*
1659	*Nov.*	21	11	33	♐	9	51	2	8	29	27	36	♊	9	49	56	−1	6
1661	*Dec.*	30	6	0	♑	19	52	14	10	12	49	57	♋	19	51	32	−0	42
1664	*Feb.*	2	18	33	♒	24	24	31	11	23	27	22	♌	24	24	31	*	*
1666	*Mart.*	8	12	6	♓	28	39	49	1	4	11	21	♍	28	38	57	−0	52
1668	*Apr.*	16	19	5	♉	7	39	52	2	17	50	8	♏	7	39	51	*	*
1670	*Jun.*	11	15	38	♋	0	46	42	4	9	38	20	♑	0	46	43	+0	1
1672	*Aug.*	29	11	24	♍	16	56	4	6	14	0	1	♓	16	56	26	+0	22
1674	*Nov.*	2	16	52	♏	21	11	32	8	10	42	53	♉	21	10	51	−0	41
1676	*Dec.*	15	19	5	♑	5	29	55	9	26	21	11	♋	5	29	36	−0	19
1679	*Jan.*	20	14	50	♒	11	27	59	11	7	39	29	♌	11	27	27	−0	32
1681	*Feb.*	22	16	18	♓	15	16	16	0	18	2	25	♍	15	16	21	+0	5
1683	*Mart.*	31	23	31	♈	21	39	18	2	0	7	10	♎	21	39	41	+0	23
1685	*Maii*	18	1	0	♊	7	38	15	3	17	50	19	♐	7	38	23	+0	8
1687	*Jul.*	29	1	0	♌	15	56	5	5	18	6	1	♒	15	56	11	+0	6
1689	*Oct.*	11	17	20	♎	29	28	52	7	20	17	29	♈	29	28	34	−0	18
1691	*Dec.*	1	3	6	♐	19	53	50	9	9	14	56	♊	19	53	36	−0	14
1694	*Jan.*	7	4	47	♑	28	11	52	10	21	43	18	♋	28	11	17	−0	35
1696	*Feb.*	10	9	0	♓	2	18	4	0	2	38	37	♍	2	17	27	−0	37
1698	*Mart.*	16	18	20	♈	7	4	17	1	13	14	27	♎	7	3	47	−0	30
1700	*Apr.*	27	7	40	♉	18	5	16	2	28	4	28	♏	18	5	10	−0	6
1702	*Jun.*	27	12	50	♋	16	10	10	4	22	41	8	♑	16	10	46	+0	36
1704	*Sept.*	15	9	54	♎	3	45	46	6	27	36	0	♈	3	45	18	−0	28
1706	*Nov.*	13	16	23	♐	2	32	1	8	21	11	33	♊	2	32	1	*	*
1708	*Dec.*	24	4	48	♑	14	18	4	10	5	28	51	♋	14	18	4	*	*
1711	*Jan.*	28	5	22	♒	19	24	6	11	16	22	2	♌	19	23	40	−0	26
1713	*Mart.*	2	12	54	♓	23	20	30	0	26	52	53	♍	23	20	50	+0	20
1715	*Apr.*	10	8	46	♉	1	3	19	2	9	45	40	♏	1	3	19	*	*
1717	*Maii*	31	9	20	♊	20	38	46	3	29	33	21	♐	20	39	7	+0	21
1719	*Aug.*	16	11	41	♍	3	57	30	6	2	29	22	♓	3	57	30	*	*

Oppoſitiones quibus Nota * * *apponitur, ob defectum accuratarum Obſervationum, ex noſtro Calculo ſupplevimus.*

EPOCHÆ MEDIORVM MOTVVM JOVIS.

Annis Julianis ineuntibus.	*Jupiter ab Æquinoct.*				*Aphel.* ♃ ♎ 8°			*Nod.* ♃ ♋ 7°		*Annis Julianis ineuntibus.*	*Jupiter ab Æquinoct.*				*Aphel.* ♃ ♎ 9°			*Nod.* ♃ ♋ 7°	
	s	°	'	"	°	'	"	'	"		s	°	'	"	°	'	"	'	"
1661	6	2	33	57		47	0	1	40	1696	5	15	16	4		29	0	30	50
62	7	2	54	35		48	12	2	30	97	6	15	41	41		30	12	31	40
63	8	3	15	13		49	24	3	20	98	7	16	2	20		31	24	32	30
64	9	3	35	51		50	36	4	10	99	8	16	22	58		32	36	33	20
1665	10	4	1	29		51	48	5	0	1700	9	16	43	36		33	48	34	10
1666	11	4	22	7		53	0	5	50	1701	10	17	9	13		35	0	35	0
67	0	4	42	45		54	12	6	40	2	11	17	29	51		36	12	35	50
68	1	5	3	23		55	24	7	30	3	0	17	50	29		37	24	36	40
69	2	5	29	0		56	36	8	20	4	1	18	11	7		38	36	37	30
1670	3	5	49	38		57	48	9	10	1705	2	18	36	45		39	48	38	20
1671	4	6	10	16		59	0	10	0	1706	3	18	57	23		41	0	39	10
72	5	6	30	54	9	0	12	10	50	7	4	19	18	1		42	12	40	0
73	6	6	56	32	♎	1	24	11	40	8	5	19	38	39		43	24	40	50
74	7	7	17	10		2	36	12	30	9	6	20	4	16		44	36	41	40
1675	8	7	37	48		3	48	13	20	1710	7	20	24	54		45	48	42	30
1676	9	7	58	26		5	0	14	10	1711	8	20	45	32		47	0	43	20
77	10	8	24	3		6	12	15	0	12	9	21	6	10		48	12	44	10
78	11	8	44	42		7	24	15	50	13	10	21	31	48		49	24	45	0
79	0	9	5	20		8	36	16	40	14	11	21	52	26		50	36	45	50
1680	1	9	25	58		9	48	17	30	1715	0	22	13	4		51	48	46	40
1681	2	9	51	35		11	0	18	20	1716	1	22	33	42		53	0	47	30
82	3	10	12	13		12	12	19	10	17	2	22	59	19		54	12	48	20
83	4	10	32	51		13	24	20	0	18	3	23	19	57		55	24	49	10
84	5	10	53	29		14	36	20	50	19	4	23	40	36		56	36	50	0
1685	6	11	19	7		15	48	21	40	1720	5	24	1	13		57	48	50	50
1686	7	11	39	45		17	0	22	30	1721	6	24	26	51		59	0	51	40
87	8	12	0	23		18	12	23	20	22	7	24	47	29	10	0	12	52	30
88	9	12	21	1		19	24	24	10	23	8	25	8	7	♎	1	24	53	20
89	10	12	46	38		20	36	25	0	24	9	25	28	45		2	36	54	10
1690	11	13	7	16		21	48	25	50	1725	10	25	54	23		3	48	55	0
1691	0	13	27	54		23	0	26	40	1726	11	26	15	1		5	0	55	50
92	1	13	48	32		24	12	27	30	27	0	26	35	39		6	12	56	40
93	2	14	14	10		25	24	28	20	28	1	26	56	17		7	24	57	30
94	3	14	34	48		26	36	29	10	29	2	27	21	54		8	36	58	20
1695	4	14	55	26		27	48	30	0	1730	3	27	42	32		9	48	59	10

EPOCHÆ MEDIORUM MOTUUM JOVIS.

Annis Julianis ineuntibus.	Jupiter ab Æquinoct.				Aph. ♃ ♎ 10°		Nod. ♃ ♋ 8°		Annis Julianis ineuntibus.	Jupiter ab Æquinoct.				Aphel. ♃ ♎ 10°		Nod. ♃ ♋ 8°	
	s	°	′	″	′	″	′	″		s	°	′	″	′	″	′	″
1731	4	28	3	10	11	0	0	0	1766	4	10	50	18	53	0	29	10
32	5	28	23	48	12	12	0	50	67	5	11	10	56	54	12	30	0
33	6	28	49	26	13	24	1	40	68	6	11	31	34	55	24	30	50
34	7	29	10	4	14	36	2	30	69	7	11	57	11	56	36	31	40
1735	8	29	30	42	15	48	3	20	1770	8	12	17	49	57	48	32	30
1736	9	29	51	20	17	0	4	10	1771	9	12	38	27	59	0	33	20
37	11	0	16	57	18	12	5	0	72	10	12	59	5	11 0	12	34	10
38	0	0	37	36	19	24	5	50	73	11	13	24	43	♎ 1	24	35	0
39	1	0	58	14	20	36	6	40	74	0	13	45	21	2	36	35	50
1740	2	1	18	52	21	48	7	30	1775	1	14	5	59	3	48	36	40
1741	3	1	44	29	23	0	8	20	1776	2	14	26	37	5	0	37	30
42	4	2	5	7	24	12	9	10	77	3	14	52	14	6	12	38	20
43	5	2	25	45	25	24	10	0	78	4	15	12	53	7	24	39	10
44	6	2	46	23	26	36	10	50	79	5	15	33	31	8	36	40	0
1745	7	3	12	1	27	48	11	40	1780	6	15	54	9	9	48	40	50
1746	8	3	32	39	29	0	12	30	1781	7	16	19	46	11	0	41	40
47	9	3	53	18	30	12	13	20	82	8	16	40	24	12	12	42	30
48	10	4	13	56	31	24	14	10	83	9	17	1	2	13	24	43	20
49	11	4	39	33	32	36	15	0	84	10	17	21	40	14	36	44	10
1750	0	5	0	11	33	48	15	50	1785	11	17	47	18	15	48	45	0
1751	1	5	20	49	35	0	16	40	1786	0	18	7	56	17	0	45	50
52	2	5	41	27	36	12	17	30	87	1	18	28	34	18	12	46	40
53	3	6	7	5	37	24	18	20	88	2	18	49	12	19	24	47	30
54	4	6	27	43	38	36	19	10	89	3	19	14	49	20	36	48	20
1755	5	6	48	21	39	48	20	0	1790	4	19	35	27	21	48	49	10
1756	6	7	8	59	41	0	20	50	1791	5	19	56	5	23	0	50	0
57	7	7	34	36	42	12	21	40	92	6	20	16	43	24	12	50	50
58	8	7	55	15	43	24	22	30	93	7	20	42	21	25	24	51	40
59	9	8	15	53	44	36	23	20	94	8	21	2	59	26	36	52	30
1760	10	8	36	31	45	48	24	10	1795	9	21	23	37	27	48	53	20
1761	11	9	2	8	47	0	25	0	1796	10	21	44	15	29	0	54	10
62	0	9	22	46	48	12	25	50	97	11	22	9	52	30	12	55	0
63	1	9	43	24	49	24	26	40	98	0	22	30	31	31	24	55	50
64	2	10	4	2	50	36	27	30	99	1	22	51	9	32	36	56	40
1765	3	10	29	40	51	48	28	20	1800	2	23	11	47	33	48	57	30

MEDIUS MOTUS JOVIS AD DIES MENSIUM.

Die Mensis.	JANUAR.			FEBRUA.			MARTII			APRILIS			MAII			JUNII		
	Med. Mot. Jovis.			Med. Mot. Jovis.			Med. Mot. Jovis.			Med. Mot. Jovis.			Med. Mot. Jovis.			Med. Mot. Jovis.		
	°	′	″	°	′	″	°	′	″	°	′	″	°	′	″	°	′	″
1	0	4	59	2	39	37	4	59	17	7	33	55	10	3	33	12	38	11
2	0	9	59	2	44	36	5	4	16	7	38	54	10	8	33	12	43	10
3	0	14	58	2	49	36	5	9	16	7	43	53	10	13	32	12	48	10
4	0	19	57	2	54	35	5	14	15	7	48	53	10	18	31	12	53	9
5	0	24	56	2	59	34	5	19	14	7	53	52	10	23	30	12	58	8
6	0	29	56	3	4	33	5	24	13	7	58	51	10	28	30	13	3	7
7	0	34	55	3	9	33	5	29	13	8	3	50	10	33	29	13	8	7
8	0	39	54	3	14	32	5	34	12	8	8	50	10	38	28	13	13	6
9	0	44	54	3	19	31	5	39	11	8	13	49	10	43	28	13	18	5
10	0	49	53	3	24	31	5	44	11	8	18	48	10	48	27	13	23	5
11	0	54	52	3	29	30	5	49	10	8	23	48	10	53	26	13	28	4
12	0	59	51	3	34	29	5	54	9	8	28	47	10	58	25	13	33	3
13	1	4	51	3	39	28	5	59	8	8	33	46	11	3	25	13	38	2
14	1	9	50	3	44	28	6	4	8	8	38	45	11	8	24	13	43	2
15	1	14	49	3	49	27	6	9	7	8	43	45	11	13	23	13	48	1
16	1	19	49	3	54	26	6	14	6	8	48	44	11	18	23	13	53	0
17	1	24	48	3	59	26	6	19	6	8	53	43	11	23	22	13	58	0
18	1	29	47	4	4	25	6	24	5	8	58	43	11	28	21	14	2	59
19	1	34	46	4	9	24	6	29	4	9	3	42	11	33	20	14	7	58
20	1	39	46	4	14	23	6	34	3	9	8	41	11	38	20	14	12	57
21	1	44	45	4	19	23	6	39	3	9	13	40	11	43	19	14	17	57
22	1	49	44	4	24	22	6	44	2	9	18	40	11	48	18	14	22	56
23	1	54	44	4	29	21	6	49	1	9	23	39	11	53	18	14	27	55
24	1	59	43	4	34	21	6	54	1	9	28	38	11	58	17	14	32	55
25	2	4	42	4	39	20	6	59	0	9	33	38	12	3	16	14	37	54
26	2	9	41	4	44	19	7	3	59	9	38	37	12	8	15	14	42	53
27	2	14	41	4	49	18	7	8	58	9	43	36	12	13	15	14	47	52
28	2	19	40	4	54	18	7	13	58	9	48	35	12	18	14	14	52	52
29	2	24	39	*In Anno* Biſſextili *poſt* Februarium *adde unius diei motum.*			7	18	57	9	53	35	12	23	13	14	57	51
30	2	29	38				7	23	56	9	58	34	12	28	12	15	2	50
31	2	34	38		′	″	7	28	55		′	″	12	33	12		′	″
Mot. Aphel.		0	6		0	12		0	18		0	24		0	30		0	36
Mot. Nodi		0	4		0	8		0	12		0	16		0	21		0	25

MEDIUS MOTUS JOVIS AD DIES MENSIUM.

Die Mensis	JULII			AUGUST.			SEPTEM.			OCTOB.			NOVEM.			DECEMB.		
	Med. Mot. Jovis.			Med. Mot. Jovis.			Med. Mot. Jovis.			Med. Mot. Jovis.			Med. Mot. Jovis.			Med. Mot. Jovis.		
	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
1	15	7	50	17	42	27	20	17	5	22	46	44	25	21	21	27	51	0
2	15	12	49	17	47	27	20	22	4	22	51	43	25	26	21	27	55	59
3	15	17	48	17	52	26	20	27	4	22	56	42	25	31	20	28	0	58
4	15	22	47	17	57	25	20	32	3	23	1	41	25	36	19	28	5	58
5	15	27	47	18	2	24	20	37	2	23	6	41	25	41	19	28	10	57
6	15	32	46	18	7	24	20	42	2	23	11	40	25	46	18	28	15	56
7	15	37	45	18	12	23	20	47	1	23	16	39	25	51	17	28	20	56
8	15	42	45	18	17	22	20	52	0	23	21	39	25	56	16	28	25	55
9	15	47	44	18	22	22	20	56	59	23	26	38	26	1	16	28	30	54
10	15	52	43	18	27	21	21	1	59	23	31	37	26	6	15	28	35	53
11	15	57	42	18	32	20	21	6	58	23	36	36	26	11	14	28	40	53
12	16	2	42	18	37	19	21	11	57	23	41	36	26	16	14	28	45	52
13	16	7	41	18	42	19	21	16	57	23	46	35	26	21	13	28	50	51
14	16	12	40	18	47	18	21	21	56	23	51	34	26	26	12	28	55	51
15	16	17	40	18	52	17	21	26	55	23	56	34	26	31	11	29	0	50
16	16	22	39	18	57	17	21	31	54	24	1	33	26	36	11	29	5	49
17	16	27	38	19	2	16	21	36	54	24	6	32	26	41	10	29	10	48
18	16	32	37	19	7	15	21	41	53	24	11	31	26	46	9	29	15	48
19	16	37	37	19	12	14	21	46	52	24	16	31	26	51	9	29	20	47
20	16	42	36	19	17	14	21	51	52	24	21	30	26	56	8	29	25	46
21	16	47	35	19	22	13	21	56	51	24	26	29	27	1	7	29	30	46
22	16	52	35	19	27	12	22	1	50	24	31	29	27	6	6	29	35	45
23	16	57	34	19	32	12	22	6	49	24	36	28	27	11	6	29	40	44
24	17	2	33	19	37	11	22	11	49	24	41	27	27	16	5	29	45	43
25	17	7	32	19	42	10	22	16	48	24	46	26	27	21	4	29	50	43
26	17	12	32	19	47	9	22	21	47	24	51	26	27	26	3	29	55	42
27	17	17	31	19	52	9	22	26	46	24	56	25	27	31	3	30	0	41
28	17	22	30	19	57	8	22	31	46	25	1	24	27	36	2	30	5	41
29	17	27	29	20	2	7	22	36	45	25	6	24	27	41	1	30	10	40
30	17	32	29	20	7	7	22	41	44	25	11	23	27	46	1	30	15	39
31	17	37	28	20	12	6		'	"	25	16	22		'	"	30	20	38
Mot. Aphel.		0	42		0	48		0	54		1	0		1	6		1	12
Mot. Nodi		0	29		0	33		0	37		0	42		0	46		0	50

MEDII MOTVS JOVIS AB ÆQVINOCTIO.

IN ANNORVM CENTVRIIS.

Annis Julian. Collect.	*Medius Motus Jovis.*				*Æquat. Secularis.*		*Motus Aphelii Jovis.*			*Motus Nodi Jovis.*		
	s	°	′	″	°	′	s	°	′	°	′	″
100	5	6	28	11	0	0,6	0	2	0	1	23	20
200	10	12	56	22	0	2,3	0	4	0	2	46	40
300	3	19	24	33	0	5,2	0	6	0	4	10	0
400	8	25	52	44	0	9,2	0	8	0	5	33	20
500	2	2	20	55	0	14,3	0	10	0	6	56	40
600	7	8	49	6	0	20,6	0	12	0	8	20	0
700	0	15	17	17	0	28,1	0	14	0	9	43	20
800	5	21	45	28	0	36,7	0	16	0	11	6	40
900	10	28	13	39	0	46,4	0	18	0	12	30	0
1000	4	4	41	50	0	57,3	0	20	0	13	53	20
1100	9	11	10	1	1	9,4	0	22	0	15	16	40
1200	2	17	38	12	1	22,6	0	24	0	16	40	0
1300	7	24	6	23	1	36,9	0	26	0	18	3	20
1400	1	0	34	34	1	52,4	0	28	0	19	26	40
1500	6	7	2	45	2	9,0	1	0	0	20	50	0
1600	11	13	30	56	2	26,8	1	2	0	22	13	20
1700	4	19	59	7	2	45,7	1	4	0	23	36	40
1800	9	26	27	18	3	5,8	1	6	0	25	0	0
1900	3	2	55	29	3	27,0	1	8	0	26	23	20
2000	8	9	23	40	3	49,4	1	10	0	27	46	40
2100	1	15	51	51	4	12.9	1	12	0	29	10	0
2200	6	22	20	2	4	37,5	1	14	0	30	33	20
2300	11	28	48	13	5	3,3	1	16	0	31	56	40
2400	5	5	16	24	5	30,3	1	18	0	33	20	0
2500	10	11	44	35	5	58,4	1	20	0	34	43	20
2600	3	18	12	46	6	27,7	1	22	0	36	6	40
2700	8	24	40	57	6	58,0	1	24	0	37	30	0
2800	2	1	9	8	7	29,6	1	26	0	38	53	20
2900	7	7	37	19	8	2,0	1	28	0	40	16	40
3000	0	14	5	30	8	36,1	2	0	0	41	40	0

IN HORIS ET MIN.

Medius Motus Jovis.					
′ H	″ ′	‴ ″	′ H	″ ′	‴ ″
1	0	12	31	6	26
2	0	25	32	6	39
3	0	37	33	6	51
4	0	50	34	7	4
5	1	2	35	7	16
6	1	15	36	7	29
7	1	27	37	7	42
8	1	40	38	7	54
9	1	52	39	8	6
10	2	5	40	8	19
11	2	17	41	8	31
12	2	30	42	8	43
13	2	42	43	8	56
14	2	54	44	9	8
15	3	7	45	9	21
16	3	19	46	9	33
17	3	32	47	9	46
18	3	44	48	9	58
19	3	57	49	10	11
20	4	9	50	10	23
21	4	22	51	10	36
22	4	34	52	10	48
23	4	47	53	11	1
24	4	59	54	11	13
25	5	12	55	11	26
26	5	24	56	11	38
27	5	37	57	11	50
28	5	49	58	12	3
29	6	1	59	12	15
30	6	14	60	12	28

Æquatio Secularis addenda eſt medio Jovis Motui, tam in Seculis præteritis quam futuris.

TABULA ÆQUATIONUM JOVIS.

Anomalia media Jovis.

	Sig. o. *Subtr.*			*Diff.*		Sig. I. *Subtr.*			*Diff.*		Sig. II. *Subtr.*			*Diff.*		
Gr.	°	′	″	′	″	°	′	″	′	″	°	′	″	′	″	
0	0	0	0	5	28	2	37	29	4	48	4	38	22	3	1	30
1	0	5	28	5	27	2	42	17	4	46	4	41	23	2	56	29
2	0	10	55	5	27	2	47	3	4	44	4	44	19	2	51	28
3	0	16	22	5	27	2	51	47	4	41	4	47	10	2	47	27
4	0	21	49	5	27	2	56	28	4	38	4	49	57	2	42	26
5	0	27	16	5	26	3	1	6	4	35	4	52	39	2	36	25
6	0	32	42	5	26	3	5	41	4	32	4	55	15	2	31	24
7	0	38	8	5	25	3	10	13	4	29	4	57	46	2	26	23
8	0	43	33	5	24	3	14	42	4	27	5	0	12	2	21	22
9	0	48	57	5	24	3	19	9	4	24	5	2	33	2	17	21
10	0	54	21	5	23	3	23	33	4	21	5	4	50	2	11	20
11	0	59	44	5	21	3	27	54	4	17	5	7	1	2	6	19
12	1	5	5	5	21	3	32	11	4	13	5	9	7	2	0	18
13	1	10	26	5	20	3	36	24	4	10	5	11	7	1	55	17
14	1	15	46	5	18	3	40	34	4	6	5	13	2	1	50	16
15	1	21	4	5	17	3	44	40	4	3	5	14	52	1	44	15
16	1	26	21	5	16	3	48	43	3	59	5	16	36	1	39	14
17	1	31	37	5	15	3	52	42	3	55	5	18	15	1	33	13
18	1	36	52	5	13	3	56	37	3	51	5	19	48	1	27	12
19	1	42	5	5	12	4	0	28	3	48	5	21	15	1	22	11
20	1	47	17	5	10	4	4	16	3	44	5	22	37	1	17	10
21	1	52	27	5	8	4	8	0	3	40	5	23	54	1	11	9
22	1	57	35	5	6	4	11	40	3	35	5	25	5	1	5	8
23	2	2	41	5	4	4	15	15	3	31	5	26	10	1	0	7
24	2	7	45	5	2	4	18	46	3	27	5	27	10	0	54	6
25	2	12	47	5	1	4	22	13	3	23	5	28	4	0	47	5
26	2	17	48	4	59	4	25	36	3	18	5	28	51	0	41	4
27	2	22	47	4	57	4	28	54	3	14	5	29	32	0	35	3
28	2	27	44	4	54	4	32	8	3	9	5	30	7	0	29	2
29	2	32	38	4	51	4	35	17	3	5	5	30	36	0	24	1
30	2	37	29			4	38	22			5	31	0			0
	Sig. XI. *Adde.*			*Diff.*		Sig. X. *Adde.*			*Diff.*		Sig. IX. *Adde.*			*Diff.*		*Gr.*

TABULA ÆQUATIONUM JOVIS.

Anomalia media Jovis.

Gr.	Sig. III. *Subtr.* ° ′ ″	*Diff.* ′ ″	Sig. IV. *Subtr.* ° ′ ″	*Diff.* ′ ″	Sig. V. *Subtr.* ° ′ ″	*Diff.* ′ ″	
0	5 31 0	0 18	4 55 40	2 45	2 54 48	5 12	30
1	5 31 18	0 12	4 52 55	2 51	2 49 36	5 16	29
2	5 31 30	0 6	4 50 4	2 56	2 44 20	5 20	28
3	5 31 36	0 0	4 47 8	3 2	2 39 0	5 24	27
4	5 31 36	0 6	4 44 6	3 7	2 33 36	5 27	26
5	5 31 30	0 12	4 40 59	3 13	2 28 9	5 30	25
6	5 31 18	0 18	4 37 46	3 19	2 22 39	5 33	24
7	5 31 0	0 25	4 34 27	3 25	2 17 6	5 36	23
8	5 30 35	0 31	4 31 2	3 30	2 11 30	5 39	22
9	5 30 4	0 37	4 27 32	3 36	2 5 51	5 42	21
10	5 29 27	0 43	4 23 56	3 41	2 0 9	5 43	20
11	5 28 44	0 49	4 20 15	3 46	1 54 26	5 46	19
12	5 27 55	0 55	4 16 29	3 52	1 48 40	5 49	18
13	5 27 0	1 2	4 12 37	3 57	1 42 51	5 51	17
14	5 25 58	1 8	4 8 40	4 2	1 37 0	5 54	16
15	5 24 50	1 14	4 4 38	4 6	1 31 6	5 56	15
16	5 23 36	1 20	4 0 32	4 11	1 25 10	5 58	14
17	5 22 16	1 26	3 56 21	4 17	1 19 12	5 59	13
18	5 20 50	1 32	3 52 4	4 22	1 13 13	6 0	12
19	5 19 17	1 38	3 47 42	4 27	1 7 13	6 2	11
20	5 17 39	1 44	3 43 15	4 31	1 1 11	6 3	10
21	5 15 55	1 50	3 38 44	4 35	0 55 8	6 5	9
22	5 14 5	1 57	3 34 9	4 40	0 49 3	6 5	8
23	5 12 8	2 4	3 29 29	4 45	0 42 58	6 6	7
24	5 10 4	2 10	3 24 44	4 49	0 36 52	6 7	6
25	5 7 54	2 15	3 19 55	4 53	0 30 45	6 8	5
26	5 5 39	2 21	3 15 2	4 57	0 24 37	6 9	4
27	5 3 18	2 26	3 10 5	5 2	0 18 28	6 9	3
28	5 0 52	2 33	3 5 3	5 6	0 12 19	6 9	2
29	4 58 19	2 39	2 59 57	5 9	0 6 10	6 10	1
30	4 55 40		2 54 48		0 0 0		0
	Sig. VIII. *Adde.*	*Diff.*	Sig. VII. *Adde.*	*Diff.*	Sig. VI. *Adde.*	*Diff.*	*Gr.*

LOGARITHMI DISTANTIARUM JOVIS A SOLE.

Anomalia media Jovis.

Gr.	Sig. o.	Sig. I.	Sig. II.	Sig. III.	Sig. IV.	Sig. V.	
	Logarith.	*Logarith.*	*Logarith.*	*Logarith.*	*Logarith.*	*Logarith.*	
0	5 736537	5 734080	5 727144	5 717093	5 706290	5 697840	30
1	5 736534	5 733916	5 726848	5 716729	5 705952	5 697636	29
2	5 736526	5 733747	5 726549	5 716364	5 705616	5 697438	28
3	5 736512	5 733573	5 726247	5 715999	5 705284	5 697246	27
4	5 736493	5 733394	5 725942	5 715633	5 704955	5 697060	26
5	5 736468	5 733210	5 725633	5 715266	5 704630	5 696880	25
6	5 736437	5 733021	5 725321	5 714899	5 704307	5 696707	24
7	5 736401	5 732827	5 725006	5 714532	5 703988	5 696540	23
8	5 736360	5 732629	5 724688	5 714165	5 703672	5 696380	22
9	5 736313	5 732426	5 724367	5 713798	5 703360	5 696227	21
10	5 736260	5 732218	5 724043	5 713431	5 703052	5 696080	20
11	5 736202	5 732006	5 723716	5 713064	5 702748	5 695940	19
12	5 736139	5 731789	5 723386	5 712697	5 702447	5 695807	18
13	5 736070	5 731567	5 723053	5 712331	5 702150	5 695680	17
14	5 735996	5 731341	5 722718	5 711965	5 701857	5 695560	16
15	5 735916	5 731110	5 722382	5 711600	5 701569	5 695447	15
16	5 735831	5 730875	5 722043	5 711236	5 701286	5 695342	14
17	5 735740	5 730635	5 721701	5 710873	5 701007	5 695244	13
18	5 735644	5 730391	5 721357	5 710511	5 700732	5 695152	12
19	5 735542	5 730143	5 721011	5 710150	5 700462	5 695067	11
20	5 735435	5 729890	5 720663	5 709791	5 700197	5 694990	10
21	5 735324	5 729633	5 720313	5 709433	5 699938	5 694920	9
22	5 735207	5 729372	5 719961	5 709076	5 699683	5 694858	8
23	5 735084	5 729107	5 719607	5 708720	5 699433	5 694803	7
24	5 734956	5 728838	5 719252	5 708366	5 699189	5 694755	6
25	5 734823	5 728565	5 718895	5 708014	5 698950	5 694713	5
26	5 734685	5 728288	5 718536	5 707665	5 698716	5 694680	4
27	5 734541	5 728008	5 718177	5 707318	5 698488	5 694655	3
28	5 734392	5 727724	5 717816	5 706973	5 698266	5 694637	2
29	5 734238	5 727436	5 717455	5 706630	5 698050	5 694626	1
30	5 734080	5 727144	5 717093	5 706290	5 697840	5 694622	0
	Sig. XI.	Sig. X.	Sig. IX.	Sig.VIII.	Sig. VII.	Sig. VI.	Gr.

TABULA LATITUDINARIA JOVIS.

Argument. Latitudinis.	Sig. 0. *Bor.* Sig. 6. *Auſt.* *Inclinatio*	*Subtr.* *Subtr.* *Reduct.*	*Curtatio*	Sig. 1. *Bor.* Sig. 7. *Auſt.* *Inclinatio*	*Subtr.* *Subtr.* *Reduct.*	*Curtatio*	Sig. 2. *Bor.* Sig. 8. *Auſt* *Inclinatio*	*Subtr.* *Subtr.* *Reduct.*	*Curtatio*	
Gr	° ′ ″	′ ″	Log.	° ′ ″	′ ″	Log.	° ′ ″	′ ″	Log.	Gr.
0	0 0 0	0 0	0	0 39 35	0 24	29	1 8 34	0 24	86	30
1	0 1 23	0 1	0	0 40 46	0 24	30	1 9 14	0 23	88	29
2	0 2 46	0 2	0	0 41 57	0 25	32	1 9 54	0 23	90	28
3	0 4 9	0 3	0	0 43 7	0 25	34	1 10 32	0 22	91	27
4	0 5 31	0 4	0	0 44 16	0 25	36	1 11 9	0 22	93	26
5	0 6 54	0 5	1	0 45 24	0 26	38	1 11 45	0 21	94	25
6	0 8 16	0 6	1	0 46 32	0 26	40	1 12 19	0 20	96	24
7	0 9 39	0 7	2	0 47 39	0 26	42	1 12 52	0 20	97	23
8	0 11 1	0 8	2	0 48 44	0 26	44	1 13 24	0 19	99	22
9	0 12 23	0 8	3	0 49 49	0 27	46	1 13 54	0 18	100	21
10	0 13 45	0 9	3	0 50 53	0 27	48	1 14 23	0 18	102	20
11	0 15 6	0 10	4	0 51 56	0 27	50	1 14 51	0 17	103	19
12	0 16 27	0 11	5	0 52 58	0 27	52	1 15 17	0 16	104	18
13	0 17 48	0 12	6	0 53 59	0 27	53	1 15 42	0 15	105	17
14	0 19 9	0 13	7	0 55 0	0 27	55	1 16 6	0 14	106	16
15	0 20 29	0 14	8	0 55 59	0 27	57	1 16 28	0 14	107	15
16	0 21 49	0 14	9	0 56 57	0 27	59	1 16 49	0 13	108	14
17	0 23 9	0 15	10	0 57 54	0 27	61	1 17 8	0 12	109	13
18	0 24 28	0 16	11	0 58 50	0 27	64	1 17 26	0 11	110	12
19	0 25 46	0 17	12	0 59 45	0 27	66	1 17 43	0 10	111	11
20	0 27 5	0 18	13	1 0 39	0 27	68	1 17 58	0 9	112	10
21	0 28 22	0 18	15	1 1 31	0 27	69	1 18 11	0 8	112	9
22	0 29 39	0 19	16	1 2 23	0 26	71	1 18 24	0 8	113	8
23	0 30 56	0 20	18	1 3 13	0 26	73	1 18 35	0 7	113	7
24	0 32 12	0 20	19	1 4 3	0 26	75	1 18 44	0 6	114	6
25	0 33 27	0 21	20	1 4 51	0 26	77	1 18 52	0 5	114	5
26	0 34 42	0 22	22	1 5 38	0 25	79	1 18 58	0 4	114	4
27	0 35 56	0 22	24	1 6 24	0 25	81	1 19 3	0 3	115	3
28	0 37 10	0 23	25	1 7 8	0 25	83	1 19 7	0 2	115	2
29	0 38 23	0 23	27	1 7 52	0 24	85	1 19 9	0 1	115	1
30	0 39 35	0 24	29	1 8 34	0 24	86	1 19 10	0 0	115	0
	Sig. 11. *Auſt.* Sig. 5. *Bor.*	*Adde.* *Adde.*		Sig. 10. *Auſt.* Sig. 4. *Bor.*	*Adde.* *Adde.*		Sig. 9 *Auſt.* Sig. 3. *Bor.*	*Adde.* *Adde.*		*Gr*

SERIES OPPOSITIONVM SOLIS ET JOVIS NOSTRA ÆTATE FACTARVM CVM COMPVTO PRÆCEDENTE COLLATA.

Oppoſitionum Tempora æquata Londini.					*Locus Solis verus.*				*Anom. med. Jovis.*				*Jupiter Heliocentricus comp.*				*Error Comp.*	
		D.	H.	′		°	′	″	s	°	′	″		°	′	″	′	″
1657	*Dec.*	16	11	2	♑	5	47	3	8	21	31	2	♋	5	44	56	−2	7
1659	*Jan.*	17	11	38	♒	8	8	32	9	24	30	7	♌	8	8	23	−0	9
1660	*Feb.*	17	6	48	♓	8	58	2	10	27	23	12	♍	8	58	44	+0	42
1661	*Mart.*	18	17	49	♈	8	59	14	0	0	14	28	♎	9	0	27	+1	13
1662	*Apr.*	18	19	22	♉	9	4	57	1	3	8	52	♏	9	5	22	+0	25
1663	*Maii*	21	7	6	♊	10	5	55	2	6	10	9	♐	10	4	47	−1	8
1664	*Jun.*	23	19	3	♋	12	46	49	3	9	21	33	♑	12	42	44	−4	5
1665	*Jul.*	30	7	4	♌	17	26	46	4	12	42	58	♒	17	21	18	−5	28
1666	*Sept.*	5	23	21	♍	23	43	18	5	16	10	14	♓	23	39	46	−3	32
1667	*Oct.*	13	10	4	♏	0	30	49	6	19	36	17	♉	0	29	37	−1	12
1668	*Nov.*	17	6	46	♐	6	24	48	7	23	4	12	♊	6	26	0	+1	12
1669	*Dec.*	20	23	15	♑	10	28	5	8	26	1	50	♋	10	31	8	+3	3
1671	*Jan.*	21	19	9	♒	12	36	11	9	29	0	0	♌	12	39	56	+3	45
1672	*Feb.*	21	12	31	♓	13	17	54	11	1	52	32	♍	13	20	54	+3	0
1673	*Mart.*	23	0	49	♈	13	18	1	0	4	44	3	♎	13	19	59	+1	58
1674	*Apr.*	23	6	20	♉	13	29	13	1	7	39	10	♏	13	29	25	+0	12
1675	*Maii*	26	0	10	♊	14	41	55	2	10	41	47	♐	14	40	7	−1	48
1676	*Jun.*	28	18	57	♋	17	38	15	3	13	54	40	♑	17	34	0	−4	15
1677	*Aug.*	4	11	58	♌	22	32	40	4	17	17	4	♒	22	28	23	−4	17
1678	*Sept.*	11	5	50	♍	28	58	35	5	20	44	40	♓	28	56	12	−2	23
1679	*Oct.*	18	13	7	♏	5	44	0	6	24	10	5	♉	5	43	38	−0	22
1680	*Nov.*	22	2	49	♐	11	24	45	7	27	26	51	♊	11	26	31	+1	46
1681	*Dec.*	25	12	41	♑	15	14	20	9	0	32	45	♋	15	15	38	+1	18
1683	*Jan.*	26	5	13	♒	17	10	0	10	3	30	7	♌	17	10	28	+0	28
1684	*Feb.*	25	20	26	♓	17	42	38	11	6	22	21	♍	17	42	47	+0	9
1685	*Mart.*	27	9	4	♈	17	39	15	0	9	13	50	♎	17	39	55	+0	40
1686	*Apr.*	27	17	9	♉	17	52	40	1	12	9	31	♏	17	54	34	+1	54
1687	*Maii*	30	15	11	♊	19	12	40	2	15	13	2	♐	19	16	48	+4	8
1688	*Julii*	3	14	44	♋	22	20	0	3	18	26	52	♑	22	26	29	+6	29
1689	*Aug.*	9	12	17	♌	27	28	10	4	21	50	15	♒	27	36	16	+8	6

SERIES OPPOSITIONVM SOLIS ET JOVIS NOSTRA ÆTATE FACTARVM CVM COMPVTO PRÆCEDENTE COLLATA.

Oppoſitionum Tempora æquata Londini.					*Locus Solis verus.*				*Anom. med. Jovis.*				*Jupiter Heliocentricus comp.*				*Error Comp.*	
		D.	H.	′		°	′	″	S	°	′	″		°	′	″	′	″
1690	*Sept.*	16	8	19	♎	4	5	0	5	25	18	14	♈	4	12	5	+7	5
1691	*Oct.*	23	13	17	♏	10	50	45	6	28	43	7	♉	10	55	38	+4	53
1692	*Nov.*	26	22	45	♐	16	24	45	8	1	59	1	♊	16	25	27	+0	42
1693	*Dec.*	30	3	33	♑	20	0	0	9	5	3	57	♋	19	58	18	—1	42
1695	*Jan.*	30	14	46	♒	21	42	5	10	8	0	14	♌	21	39	17	—2	48
1696	*Mart.*	1	3	47	♓	22	5	25	11	10	51	55	♍	22	3	38	—1	47
1697	*Mart.*	31	17	18	♈	21	59	52	0	13	43	43	♎	22	0	11	+0	19
1698	*Maii*	2	5	26	♉	22	19	8	1	16	40	16	♏	22	21	6	+1	58
1699	*Jun.*	4	9	33	♊	23	51	10	2	19	45	0	♐	23	55	57	+4	47
1700	*Jul.*	8	16	0	♋	27	15	0	3	23	0	14	♑	27	22	11	+7	14
1701	*Aug.*	14	20	2	♍	2	42	15	4	26	24	55	♓	2	47	23	+5	8
1702	*Sept.*	21	17	1	♎	9	27	35	5	29	53	10	♈	9	29	35	+2	0
1703	*Oct.*	28	17	20	♏	16	8	0	7	3	17	6	♉	16	6	36	—1	24
1704	*Dec.*	1	18	46	♐	21	25	0	8	6	31	18	♊	21	22	26	—2	34
1706	*Jan.*	3	16	6	♑	24	41	37	9	9	34	41	♋	24	38	37	—3	0
1707	*Feb.*	3	21	55	♒	26	7	40	10	12	29	52	♌	26	6	21	—1	19
1708	*Mart.*	5	9	10	♓	26	22	48	11	15	21	9	♍	26	23	47	+0	59
1709	*Apr.*	5	0	50	♈	26	18	10	0	18	13	20	♎	26	20	37	+2	27
1710	*Maii*	6	17	55	♉	26	45	37	1	21	10	54	♏	26	48	55	+3	18
1711	*Jun.*	9	6	22	♊	28	35	20	2	24	17	25	♐	28	37	42	+2	22
1712	*Jul.*	13	21	38	♌	2	20	45	3	27	34	29	♒	2	21	2	+0	17
1713	*Aug.*	20	5	53	♍	8	2	10	5	1	0	5	♓	8	1	5	—1	5
1714	*Sept.*	27	2	4	♎	14	52	0	6	4	28	10	♈	14	47	10	—4	50
1715	*Nov.*	2	19	13	♏	21	20	27	7	7	50	36	♉	21	17	14	—3	13
1716	*Dec.*	6	12	35	♐	26	20	18	8	11	3	8	♊	26	16	46	—3	32
1718	*Jan.*	8	2	32	♑	29	17	40	9	14	4	58	♋	29	16	30	—1	10
1719	*Feb.*	8	4	12	♓	0	30	35	10	16	59	11	♍	0	31	52	+1	17
1720	*Mart.*	9	16	20	♈	0	43	51	11	19	50	45	♎	0	43	51	+	
1721	*Apr.*	9	10	52	♉	0	41	59	0	22	43	36	♏	0	41	59	+	
1722	*Maii*	11	9	19	♊	1	18	41	1	25	42	13	♐	1	18	41	+	

EPOCHÆ MEDIORVM MOTVVM SATVRNI.

Annis Julianis ineuntibus.	*Saturnus ab Æquinoct.*				*Aphel.* ♄ ♐ 27°			*Nod.* ♄ ♋ 20°			*Annis Julianis ineuntibus.*	*Saturnus ab Æquinoct.*				*Aphel.* ♄ ♐ 28°			*Nod.* ♄ ♋ 21°	
	s	°	′	″	°	′	″	°	′	″		s	°	′	″	°	′	″	′	″
1661	7	12	15	29		41	20		53	24	1696	9	20	19	4		28	0	3	54
62	7	24	28	50		42	40		53	42	97	10	2	34	26		29	20	4	12
63	8	6	42	12		44	0		54	0	98	10	14	47	48		30	40	4	30
64	8	18	55	33		45	20		54	18	99	10	27	1	9		32	0	4	48
1665	9	1	10	55		46	40		54	26	1700	11	9	14	31		33	20	5	6
1666	9	13	24	17		48	0		54	54	1701	11	21	29	53		34	40	5	24
67	9	25	37	38		49	20		55	12	2	0	3	43	14		36	0	5	42
68	10	7	51	0		50	40		55	30	3	0	15	56	36		37	20	6	0
69	10	20	6	22		52	0		55	48	4	0	28	9	57		38	40	6	18
1670	11	2	19	43		53	20		56	6	1705	1	10	25	19		40	0	6	36
1671	11	14	33	5		54	40		56	24	1706	1	22	38	41		41	20	6	54
72	11	26	46	26		56	0		56	42	7	2	4	52	2		42	40	7	12
73	0	9	1	48		57	20		57	0	8	2	17	5	24		44	0	7	30
74	0	21	15	9		58	40		57	18	9	2	29	20	40		45	20	7	48
1675	1	3	28	31	28 ♐		0		57	36	1710	3	11	34	7		46	40	8	6
1676	1	15	41	52		1	20		57	54	1711	3	23	47	29		48	0	8	24
77	1	27	57	14		2	40		58	12	12	4	6	0	50		49	20	8	42
78	2	10	10	36		4	0		58	30	13	4	18	16	12		50	40	9	0
79	2	22	23	57		5	20		58	48	14	5	0	29	33		52	0	9	18
1680	3	4	37	19		6	40		59	6	1715	5	12	42	55		53	20	9	36
1681	3	16	52	41		8	0		59	24	1716	5	24	56	16		54	40	9	54
82	3	29	6	2		9	20		59	42	17	6	7	11	38		56	0	10	12
83	4	11	19	24		10	40	21	0	0	18	6	19	25	0		57	20	10	30
84	4	23	32	45		12	0	♋	0	18	19	7	1	38	21		58	40	10	48
1685	5	5	48	7		13	20		0	36	1720	7	13	51	43	29 ♐		0	11	6
1686	5	18	1	29		14	40		0	54	1721	7	26	7	5		1	20	11	24
87	6	0	14	50		16	0		1	12	22	8	8	20	26		2	40	11	42
88	6	12	28	12		17	20		1	30	23	8	20	33	48		4	0	12	0
89	6	24	43	34		18	40		1	48	24	9	2	47	9		5	20	12	18
1690	7	6	56	55		20	0		2	6	1725	9	15	2	31		6	40	12	36
1691	7	19	10	17		21	20		2	24	1726	9	27	15	53		8	0	12	54
92	8	1	23	38		22	40		2	42	27	10	9	29	14		9	20	13	12
93	8	13	39	0		24	0		3	0	28	10	21	42	36		10	40	13	30
94	8	25	52	21		25	20		3	18	29	11	3	57	58		12	0	13	48
1695	9	8	5	43		26	40		3	36	1730	11	16	11	19		13	20	14	6

EPOCHÆ MEDIORUM MOTUUM SATURNI.

Annis Juli-anis ineuntibus.	Saturnus ab Æquinoct.				Aphel. ♄ ♐ 29°			Nod. ♄ ♋ 21°		Annis Juli-anis ineuntibus.	Saturnus ab Æquinoct.				Aphel. ♄ ♑ 0°			Nod. ♄ ♋ 21°	
	s	°	′	″	°	′	″	′	″		s	°	′	″	°	′	″	′	″
1731	11	28	24	41		14	40	14	24	1766	2	6	30	17		1	20	24	54
32	0	10	38	2		16	0	14	42	67	2	18	43	38		2	40	25	12
33	0	22	53	24		17	20	15	0	68	3	0	57	0		4	0	25	30
34	1	5	6	45		18	40	15	18	69	3	13	12	22		5	20	25	48
1735	1	17	20	7		20	0	15	36	1770	3	25	25	43		6	40	26	6
1736	1	29	33	28		21	20	15	54	1771	4	7	39	5		8	0	26	24
37	2	11	48	50		22	40	16	12	72	4	19	52	26		9	20	26	42
38	2	24	2	12		24	0	16	30	73	5	2	7	48		10	40	27	0
39	3	6	15	33		25	20	16	48	74	5	14	21	9		12	0	27	18
1740	3	18	28	55		26	40	17	6	1775	5	26	34	31		13	20	27	36
1741	4	0	44	17		28	0	17	24	1776	6	8	47	52		14	40	27	54
42	4	12	57	38		29	20	17	42	77	6	21	3	14		16	0	28	12
43	4	25	11	0		30	40	18	0	78	7	3	16	36		17	20	28	30
44	5	7	24	21		32	0	18	18	79	7	15	29	57		18	40	28	48
1745	5	19	39	43		33	20	18	36	1780	7	27	43	19		20	0	29	6
1746	6	1	53	5		34	40	18	54	1781	8	9	58	41		21	20	29	24
47	6	14	6	26		36	0	19	12	82	8	22	12	2		22	40	29	42
48	6	26	19	48		37	20	19	30	83	9	4	25	24		24	0	30	0
49	7	8	35	10		38	40	19	48	84	9	16	38	45		25	20	30	18
1750	7	20	48	31		40	0	20	6	1785	9	28	54	7		26	40	30	36
1751	8	3	1	53		41	20	20	24	1786	10	11	7	29		28	0	30	54
52	8	15	15	14		42	40	20	42	87	10	23	20	50		29	20	31	12
53	8	27	30	36		44	0	21	0	88	11	5	34	12		30	40	31	30
54	9	9	43	57		45	20	21	18	89	11	17	49	34		32	0	31	48
1755	9	21	57	19		46	40	21	36	1790	0	0	2	55		33	20	32	6
1756	10	4	10	40		48	0	21	54	1791	0	12	16	17		34	40	32	24
57	10	16	26	2		49	20	22	12	92	0	24	29	38		36	0	32	42
58	10	28	39	24		50	40	22	30	93	1	6	45	0		37	20	33	0
59	11	10	52	45		52	0	22	48	94	1	18	58	21		38	40	33	18
1760	11	23	6	7		53	20	23	6	1795	2	1	11	43		40	0	33	36
1761	0	5	21	29		54	40	23	24	1796	2	13	25	4		41	20	33	54
62	0	17	34	50		56	0	23	42	97	2	25	40	26		42	40	34	12
63	0	29	48	12		57	20	24	0	98	3	7	53	48		44	0	34	30
64	1	12	1	33		58	40	24	18	99	3	20	7	9		45	20	34	48
1765	1	24	16	55	♑	0	0	24	36	1800	4	2	20	31		46	40	35	0

MEDIVS MOTVS SATVRNI
AD DIES MENSIVM.

Die Menſis.	JANUAR.			FEBRUA.			MARTII			APRILIS			MAII			JUNII		
	Med. Mot. Saturni.			*Med. Mot. Saturni.*			*Med. Mot. Saturni.*			*Med. Mot. Saturni.*			*Med. Mot. Saturni.*			*Med. Mot. Saturni.*		
	°	′	″	°	′	″	°	′	″	°	′	″	°	′	″	°	′	″
1	0	2	1	1	4	18	2	0	33	3	2	50	4	3	7	5	5	24
2	0	4	1	1	6	18	2	2	34	3	4	51	4	5	7	5	7	24
3	0	6	2	1	8	19	2	4	34	3	6	51	4	7	8	5	9	25
4	0	8	2	1	10	19	2	6	35	3	8	52	4	9	8	5	11	26
5	0	10	3	1	12	20	2	8	35	3	10	52	4	11	9	5	13	26
6	0	12	3	1	14	20	2	10	36	3	12	53	4	13	10	5	15	27
7	0	14	4	1	16	21	2	12	36	3	14	54	4	15	10	5	17	27
8	0	16	4	1	18	22	2	14	37	3	16	54	4	17	11	5	19	28
9	0	18	5	1	20	22	2	16	38	3	18	55	4	19	11	5	21	28
10	0	20	6	1	22	23	2	18	38	3	20	55	4	21	12	5	23	29
11	0	22	6	1	24	23	2	20	39	3	22	56	4	23	12	5	25	29
12	0	24	7	1	26	24	2	22	39	3	24	56	4	25	13	5	27	30
13	0	26	7	1	28	24	2	24	40	3	26	57	4	27	13	5	29	30
14	0	28	8	1	30	25	2	26	40	3	28	57	4	29	14	5	31	31
15	0	30	8	1	32	25	2	28	41	3	30	58	4	31	14	5	33	32
16	0	32	9	1	34	26	2	30	41	3	32	58	4	33	15	5	35	32
17	0	34	9	1	36	26	2	32	41	3	34	59	4	35	16	5	37	33
18	0	36	10	1	38	27	2	34	42	3	37	0	4	37	16	5	39	33
19	0	38	10	1	40	28	2	36	43	3	39	0	4	39	17	5	41	34
20	0	40	11	1	42	28	2	38	44	3	41	1	4	41	17	5	43	34
21	0	42	12	1	44	29	2	40	44	3	43	1	4	43	18	5	45	35
22	0	44	12	1	46	29	2	42	45	3	45	2	4	45	18	5	47	35
23	0	46	13	1	48	30	2	44	45	3	47	2	4	47	19	5	49	36
24	0	48	13	1	50	30	2	46	46	3	49	3	4	49	19	5	51	36
25	0	50	14	1	52	31	2	48	46	3	51	3	4	51	20	5	53	37
26	0	52	14	1	54	31	2	50	47	3	53	4	4	53	20	5	55	38
27	0	54	15	1	56	32	2	52	47	3	55	4	4	55	21	5	57	38
28	0	56	15	1	58	33	2	54	48	3	57	5	4	57	22	5	59	39
29	0	58	16	*In Anno* Biſſextili *poſt* Februarium *adde unius diei motum.*			2	56	48	3	59	6	4	59	22	6	1	39
30	1	0	17				2	58	49	4	1	6	5	1	23	6	3	40
31	1	2	17		′	″	3	0	50		′	″	5	3	23		′	″
Mot. Aphel.		0	7		0	13		0	20		0	27		0	33		0	40
Mot. Nodi		0	2		0	3		0	5		0	6		0	8		0	9

MEDII MOTUS SATURNI. AD DIES MENSIUM.

Die Menſis.	JULII			AUGUST.			SEPTEM.			OCTOB.			NOVEM.			DECEMB.		
	Med. Mot. Saturni.			*Med. Mot. Saturni.*			*Med. Mot. Saturni.*			*Med. Mot. Saturni.*			*Med. Mot. Saturni.*			*Med. Mot. Saturni.*		
	°	′	″	°	′	″	°	′	″	°	′	″	°	′	″	°	′	″
1	6	5	40	7	7	57	8	10	15	9	10	31	10	12	48	11	13	5
2	6	7	41	7	9	58	8	12	15	9	12	32	10	14	49	11	15	6
3	6	9	42	7	11	58	8	14	16	9	14	32	10	16	49	11	17	6
4	6	11	42	7	13	59	8	16	16	9	16	33	10	18	50	11	19	7
5	6	13	43	7	15	59	8	18	17	9	18	33	10	20	50	11	21	7
6	6	15	43	7	18	0	8	20	17	9	20	34	10	22	51	11	23	8
7	6	17	44	7	20	0	8	22	18	9	22	34	10	24	51	11	25	8
8	6	19	44	7	22	1	8	24	18	9	24	35	10	26	52	11	27	9
9	6	21	45	7	24	1	8	26	19	9	26	35	10	28	52	11	29	9
10	6	23	45	7	26	2	8	28	19	9	28	36	10	30	53	11	31	10
11	6	25	46	7	28	2	8	30	20	9	30	36	10	32	53	11	33	11
12	6	27	46	7	30	3	8	32	20	9	32	37	10	34	54	11	35	11
13	6	29	47	7	32	4	8	34	21	9	34	37	10	36	55	11	37	12
14	6	31	48	7	34	4	8	36	21	9	36	38	10	38	55	11	39	12
15	6	33	48	7	36	5	8	38	22	9	38	39	10	40	56	11	41	13
16	6	35	49	7	38	5	8	40	23	9	40	39	10	42	56	11	43	13
17	6	37	49	7	40	6	8	42	23	9	42	40	10	44	57	11	45	14
18	6	39	50	7	42	6	8	44	24	9	44	40	10	46	58	11	47	14
19	6	41	50	7	44	7	8	46	25	9	46	41	10	48	58	11	49	15
20	6	43	51	7	46	7	8	48	25	9	48	42	10	50	59	11	51	15
21	6	45	51	7	48	8	8	50	26	9	50	42	10	52	59	11	53	16
22	6	47	52	7	50	9	8	52	26	9	52	43	10	55	0	11	55	16
23	6	49	52	7	52	9	8	54	27	9	54	43	10	57	0	11	57	17
24	6	51	53	7	54	10	8	56	27	9	56	44	10	59	1	11	59	18
25	6	53	54	7	56	10	8	58	28	9	58	44	11	1	2	12	1	18
26	6	55	54	7	58	11	9	0	28	10	0	45	11	3	2	12	3	19
27	6	57	55	8	0	11	9	2	29	10	2	46	11	5	3	12	5	19
28	6	59	55	8	2	12	9	4	29	10	4	46	11	7	3	12	7	20
29	7	1	56	8	4	13	9	6	30	10	6	47	11	9	4	12	9	20
30	7	3	56	8	6	13	9	8	31	10	8	47	11	11	5	12	11	21
31	7	5	57	8	8	14		′	″	10	10	48		′	″	12	13	21
Mot. Aphel.		0	47		0	53		1	0		1	7		1	13		1	20
Mot. Nodi		0	11		0	12		0	13		0	15		0	16		0	18

MEDII MOTVS SATVRNI AB ÆQVINOCTIO.

IN ANNORUM CENTURIIS.

Annis Julian. Collect.	*Medius Motus Saturni.*				*Æquatio Secularis*		*Motus Aphelii Saturni.*				*Motus Nodi Saturni*	
	S	°	'	''	°	'	S	°	'	''	°	'
100	4	23	6	0	0	1,4	0	2	13	20	0	30
200	9	16	12	0	0	5,6	0	4	26	40	1	0
300	2	9	18	0	0	12,5	0	6	40	0	1	30
400	7	2	24	0	0	22,2	0	8	53	20	2	0
500	11	25	30	0	0	34,8	0	11	6	40	2	30
600	4	18	36	0	0	50,0	0	13	20	0	3	0
700	9	11	42	0	1	8,1	0	15	33	20	3	30
800	2	4	48	0	1	29,0	0	17	46	40	4	0
900	6	27	54	0	1	52,6	0	20	0	0	4	30
1000	11	21	0	0	2	19,0	0	22	13	20	5	0
1100	4	14	6	0	2	48,2	0	24	26	40	5	30
1200	9	7	12	0	3	20,2	0	26	40	0	6	0
1300	2	0	18	0	3	55,0	0	28	53	20	6	30
1400	6	23	24	0	4	32,5	1	1	6	40	7	0
1500	11	16	30	0	5	12,8	1	3	20	0	7	30
1600	4	9	36	0	5	55,9	1	5	33	20	8	0
1700	9	2	42	0	6	41,7	1	7	46	40	8	30
1800	1	25	48	0	7	30,4	1	10	0	0	9	0
1900	6	18	54	0	8	21,8	1	12	13	20	9	30
2000	11	12	0	0	9	16,1	1	14	26	40	10	0
2100	4	5	6	0	10	13,1	1	16	40	0	10	30
2200	8	28	12	0	11	12,9	1	18	53	20	11	0
2300	1	21	18	0	12	15,4	1	21	6	40	11	30
2400	6	14	24	0	13	20,8	1	23	20	0	12	0
2500	11	7	30	0	14	28,9	1	25	33	20	12	30
2600	4	0	36	0	15	39,7	1	27	46	40	13	0
2700	8	23	42	0	16	53 4	2	0	0	0	13	30
2800	1	16	48	0	18	9,8	2	2	13	20	14	0
2900	6	9	54	0	19	29,1	2	4	26	40	14	30
3000	11	3	0	0	20	51,1	2	6	40	0	15	0

IN HORIS ET MIN.

Medius Motus Saturni.

' H	'' '	''' ''	' H	'' '	''' ''
1	0	5	31	2	36
2	0	10	32	2	41
3	0	15	33	2	46
4	0	20	34	2	51
5	0	25	35	2	56
6	0	30	36	3	1
7	0	35	37	3	6
8	0	40	38	3	11
9	0	45	39	3	16
10	0	50	40	3	21
11	0	55	41	3	26
12	1	0	42	3	31
13	1	5	43	3	36
14	1	10	44	3	41
15	1	15	45	3	46
16	1	20	46	3	51
17	1	25	47	3	56
18	1	30	48	4	1
19	1	35	49	4	6
20	1	40	50	4	11
21	1	45	51	4	16
22	1	50	52	4	21
23	1	55	53	4	26
24	2	1	54	4	31
25	2	6	55	4	36
26	2	11	56	4	41
27	2	16	57	4	46
28	2	21	58	4	51
29	2	26	59	4	56
30	2	31	60	5	1

Æquatio Secularis ſubtrahenda eſt e medio Motu Saturni *tam in Seculis præteritis quam futuris.*

TABULA ÆQUATIONUM SATURNI.

Anomalia media Saturni.

Gr.	Sig. 0. *Subtr.*	*Diff.*	Sig. I. *Subtr.*	*Diff.*	Sig. II. *Subtr.*	*Diff.*	
	° ' "	' "	° ' "	' "	° ' "	' "	
0	0 0 0		3 4 27		5 27 13		30
1	0 6 23	6 23	3 10 6	5 39	5 30 49	3 36	29
2	0 12 46	6 23	3 15 43	5 37	5 34 19	3 30	28
3	0 19 9	6 23	3 21 16	5 33	5 37 43	3 24	27
4	0 25 31	6 22	3 26 47	5 30	5 41 2	3 19	26
5	0 31 53	6 22	3 32 14	5 27	5 44 15	3 13	25
6	0 38 15	6 22	3 37 39	5 24	5 47 22	3 7	24
7	0 44 36	6 21	3 42 59	5 21	5 50 23	3 1	23
8	0 50 56	6 20	3 48 16	5 17	5 53 19	2 55	22
9	0 57 16	6 20	3 53 29	5 13	5 56 9	2 50	21
10	1 3 34	6 18	3 58 40	5 10	5 58 53	2 44	20
11	1 9 52	6 17	4 3 46	5 6	6 1 31	2 38	19
12	1 16 9	6 17	4 8 49	5 3	6 4 2	2 31	18
13	1 22 25	6 16	4 13 48	4 59	6 6 27	2 25	17
14	1 28 39	6 14	4 18 43	4 55	6 8 47	2 19	16
15	1 34 52	6 13	4 23 33	4 50	6 11 0	2 13	15
16	1 41 4	6 12	4 28 20	4 46	6 13 6	2 6	14
17	1 47 14	6 10	4 33 2	4 42	6 15 7	2 0	13
18	1 53 23	6 9	4 37 41	4 38	6 17 1	1 54	12
19	1 59 30	6 7	4 42 14	4 33	6 18 48	1 47	11
20	2 5 35	6 5	4 46 44	4 29	6 20 28	1 40	10
21	2 11 38	6 3	4 51 8	4 24	6 22 2	1 34	9
22	2 17 40	6 2	4 55 29	4 20	6 23 30	1 28	8
23	2 23 39	5 59	4 59 44	4 15	6 24 51	1 21	7
24	2 29 36	5 57	5 3 55	4 11	6 26 5	1 14	6
25	2 35 31	5 55	5 8 1	4 6	6 27 12	1 7	5
26	2 41 23	5 52	5 12 2	4 1	6 28 12	1 0	4
27	2 47 13	5 50	5 15 58	3 56	6 29 5	0 53	3
28	2 53 0	5 47	5 19 49	3 51	6 29 52	0 46	2
29	2 58 45	5 45	5 23 34	3 45	6 30 31	0 39	1
30	3 4 27	5 42	5 27 13	3 39	6 31 3	0 32	0
Gr.	Sig. XI. *Adde.*	*Diff.*	Sig. X. *Adde.*	*Diff.*	Sig. IX. *Adde.*	*Diff.*	Gr.

TABULA ÆQUATIONUM SATURNI.

Anomalia media Saturni.

	Sig. III. *Subtr.*	*Diff.*	Sig. IV. *Subtr.*	*Diff.*	Sig. V. *Subtr.*	*Diff.*	
Gr.	° ' "	' "	° ' "	' "	° ' "	' "	
0	6 31 3		5 51 18		3 28 41		30
1	6 31 29	0 26	5 48 6	3 12	3 22 29	6 12	29
2	6 31 48	0 19	5 44 47	3 19	3 16 12	6 17	28
3	6 32 0	0 12	5 41 22	3 25	3 9 51	6 21	27
4	6 32 4	0 4	5 37 50	3 32	3 3 26	6 25	26
5	6 32 1	0 3	5 34 10	3 40	2 56 57	6 29	25
6	6 31 51	0 10	5 30 23	3 47	2 50 24	6 33	24
7	6 31 33	0 18	5 26 30	3 53	2 43 47	6 37	23
8	6 31 8	0 25	5 22 30	4 0	2 37 7	6 40	22
9	6 30 36	0 32	5 18 23	4 7	2 30 23	6 44	21
10	6 29 58	0 39	5 14 10	4 13	2 23 35	6 48	20
11	6 29 11	0 47	5 9 50	4 20	2 16 44	6 51	19
12	6 28 17	0 54	5 5 24	4 26	2 9 51	6 53	18
13	6 27 16	1 1	5 0 51	4 33	2 2 54	6 56	17
14	6 26 8	1 8	4 56 12	4 39	1 55 55	6 59	16
15	6 24 52	1 16	4 51 26	4 45	1 48 53	7 2	15
16	6 23 29	1 23	4 46 35	4 51	1 41 49	7 4	14
17	6 21 58	1 31	4 41 38	4 57	1 34 43	7 6	13
18	6 20 20	1 38	4 36 35	5 3	1 27 34	7 9	12
19	6 18 35	1 45	4 31 26	5 9	1 20 23	7 11	11
20	6 16 43	1 52	4 26 10	5 16	1 13 10	7 13	10
21	6 14 42	2 0	4 20 49	5 21	1 5 56	7 14	9
22	6 12 35	2 7	4 15 22	5 27	0 58 40	7 16	8
23	6 10 21	2 14	4 9 49	5 33	0 51 23	7 17	7
24	6 8 0	2 21	4 4 11	5 38	0 44 5	7 18	6
25	6 5 31	2 29	3 58 29	5 42	0 36 46	7 19	5
26	6 2 55	2 36	3 52 42	5 47	0 29 25	7 21	4
27	6 0 11	2 43	3 46 49	5 53	0 22 4	7 21	3
28	5 57 21	2 50	3 40 51	5 58	0 14 43	7 21	2
29	5 54 23	2 58	3 34 48	6 3	0 7 22	7 21	1
30	5 51 18	3 5	3 28 41	6 7	0 0 0	7 22	0
Gr.	Sig. VIII. *Adde.*	*Diff.*	Sig. VII. *Adde.*	*Diff.*	Sig. VI. *Adde.*	*Diff.*	Gr.

LOGARITHMI DISTANTIARUM SATURNI A SOLE.

Anomalia media Saturni.

Gr.	Sig. 0. Logarith.	Differentia.	Sig. I. Logarith.	Differentia.	Sig. II. Logarith.	Differentia.	
0	6 003628		6 000791		5 992741		30
1	6 003625	3	6 000601	189	5 992397	344	29
2	6 003615	10	6 000406	195	5 992048	349	28
3	6 003599	16	6 000205	201	5 991696	352	27
4	6 003577	22	5 999998	207	5 991340	356	26
5	6 003548	29	5 999786	212	5 990979	360	25
6	6 003513	35	5 999568	218	5 990615	364	24
7	6 003471	42	5 999344	224	5 990247	368	23
8	6 003424	47	5 999114	230	5 989875	372	22
9	6 003369	55	5 998878	236	5 989500	375	21
10	6 003309	60	5 998637	241	5 989122	378	20
11	6 003242	67	5 998390	246	5 988739	383	19
12	6 003170	72	5 998138	252	5 988353	386	18
13	6 003090	80	5 997882	256	5 987964	389	17
14	6 003004	86	5 997620	262	5 987572	392	16
15	6 002911	92	5 997351	268	5 987177	395	15
16	6 002813	98	5 997078	273	5 986779	398	14
17	6 002708	105	5 996800	278	5 986378	400	13
18	6 002598	110	5 996517	283	5 985975	403	12
19	6 002481	117	5 996229	288	5 985570	405	11
20	6 002358	123	5 995935	294	5 985161	408	10
21	6 002229	129	5 995637	298	5 984750	411	9
22	6 002094	135	5 995334	303	5 984336	414	8
23	6 001952	142	5 995026	308	5 983920	416	7
24	6 001804	148	5 994713	313	5 983502	418	6
25	6 001650	154	5 994396	317	5 983082	420	5
26	6 001490	160	5 994074	322	5 982660	421	4
27	6 001324	166	5 993747	327	5 982237	423	3
28	6 001152	172	5 993416	331	5 981812	425	2
29	6 000974	177	5 993081	335	5 981386	426	1
30	6 000791	183	5 992741	340	5 980957	428	0
	Sig. XI.	Diff.	Sig. X.	Diff.	Sig. IX.	Diff.	Gr.

LOGARITHMI DISTANTIARUM SATURNI A SOLE.

Anomalia media Saturni.

Gr.	Sig. III. *Logarith.*	*Differentia.*	Sig. IV. *Logarith.*	*Differentia.*	Sig. V. *Logarith.*	*Differentia.*	
0	5 980957	429	5 968128	404	5 957965	247	30
1	5 980528	430	5 967724	401	5 957718	240	29
2	5 980098	431	5 967323	397	5 957478	233	28
3	5 979667	432	5 966926	394	5 957245	225	27
4	5 979234	433	5 966532	391	5 957020	217	26
5	5 978801	433	5 966141	387	5 956803	210	25
6	5 978368	434	5 965754	383	5 956593	202	24
7	5 977934	435	5 965371	379	5 956391	194	23
8	5 977499	435	5 964992	375	5 956197	187	22
9	5 977064	435	5 964617	370	5 956010	178	21
10	5 976629	435	5 964247	366	5 955832	170	20
11	5 976194	434	5 963881	361	5 955662	162	19
12	5 975760	434	5 963520	357	5 955500	153	18
13	5 975326	434	5 963163	351	5 955347	145	17
14	5 974892	433	5 962811	346	5 955202	137	16
15	5 974459	433	5 962465	341	5 955065	128	15
16	5 974026	432	5 962123	336	5 954937	120	14
17	5 973594	431	5 961787	330	5 954817	111	13
18	5 973163	429	5 961456	325	5 954706	102	12
19	5 972734	428	5 961131	319	5 954604	94	11
20	5 972306	426	5 960812	313	5 954510	85	10
21	5 971879	425	5 960499	307	5 954425	76	9
22	5 971454	423	5 960191	301	5 954349	67	8
23	5 971031	422	5 959890	295	5 954282	58	7
24	5 970609	420	5 959595	288	5 954224	50	6
25	5 970189	417	5 959306	281	5 954174	40	5
26	5 969772	414	5 959025	275	5 954134	31	4
27	5 969357	412	5 958749	268	5 954103	22	3
28	5 968945	410	5 958481	261	5 954080	13	2
29	5 968535	407	5 958219	254	5 954067	4	1
30	5 968128		5 957965		5 954062		0
	Sig. VIII.	*Diff.*	Sig. VII.	*Diff.*	Sig. VI.	*Diff.*	*Gr.*

TABULA LATITUDINARIA SATURNI.

Argument. Latitudinis.	Sig. 0. Bor.			Subtr.		Curtatio	Sig. 1. Bor.			Subtr.		Curtatio	Sig. 2. Bor.			Subtr.		Curtatio	
	Sig. 6. *Auſt*			*Subtr.*			Sig. 7. *Auſt.*			*Subtr.*			Sig. 8. *Auſt*			*Subtr.*			
	Inclinatio			*Reduct.*			*Inclinatio*			*Reduct.*			*Inclinatio*			*Reduct.*			
Gr.	°	'	"	'	"	Log.	°	'	"	'	"	Log.	°	'	"	'	"	Log.	
0	0	0	0	0	0	0	1	15	4	1	25	103	2	10	2	1	25	310	30
1	0	2	37	0	4	0	1	17	19	1	26	110	2	11	20	1	23	316	29
2	0	5	14	0	8	1	1	19	33	1	27	116	2	12	35	1	21	322	28
3	0	7	51	0	11	1	1	21	46	1	29	123	2	13	47	1	19	328	27
4	0	10	28	0	15	2	1	23	58	1	31	129	2	14	58	1	17	334	26
5	0	13	5	0	18	3	1	26	7	1	32	136	2	16	5	1	15	340	25
6	0	15	41	0	21	5	1	28	15	1	33	143	2	17	10	1	13	345	24
7	0	18	18	0	24	6	1	30	21	1	34	150	2	18	13	1	11	350	23
8	0	20	53	0	27	8	1	32	26	1	35	157	2	19	13	1	9	355	22
9	0	23	29	0	31	10	1	34	29	1	35	164	2	20	11	1	6	360	21
10	0	26	4	0	34	12	1	36	30	1	36	171	2	21	6	1	3	365	20
11	0	28	39	0	37	15	1	38	30	1	36	178	2	21	59	1	1	370	19
12	0	31	13	0	41	18	1	40	28	1	37	185	2	22	49	0	58	374	18
13	0	33	46	0	44	21	1	42	24	1	37	192	2	23	36	0	55	378	17
14	0	36	19	0	47	24	1	44	18	1	38	200	2	24	21	0	52	382	16
15	0	38	51	0	49	28	1	46	10	1	38	207	2	25	3	0	49	386	15
16	0	41	23	0	52	32	1	48	0	1	38	214	2	25	42	0	47	389	14
17	0	43	54	0	55	36	1	49	48	1	38	221	2	26	19	0	44	393	13
18	0	46	24	0	58	40	1	51	35	1	37	228	2	26	53	0	41	396	12
19	0	48	53	1	1	44	1	53	19	1	37	236	2	27	24	0	37	399	11
20	0	51	21	1	3	48	1	55	1	1	36	243	2	27	53	0	34	401	10
21	0	53	48	1	6	53	1	56	41	1	36	250	2	28	19	0	31	403	9
22	0	56	14	1	9	58	1	58	19	1	35	257	2	28	42	0	27	406	8
23	0	58	39	1	11	63	1	59	55	1	35	264	2	29	3	0	24	408	7
24	1	1	4	1	13	68	2	1	29	1	34	271	2	29	21	0	21	409	6
25	1	3	27	1	15	74	2	3	0	1	33	277	2	29	36	0	18	410	5
26	1	5	49	1	17	79	2	4	29	1	32	284	2	29	48	0	15	411	4
27	1	8	9	1	19	85	2	5	56	1	31	291	2	29	57	0	11	412	3
28	1	10	29	1	21	91	2	7	20	1	29	297	2	30	4	0	8	413	2
29	1	12	47	1	23	97	2	8	42	1	27	303	2	30	8	0	4	414	1
30	1	15	4	1	25	103	2	10	2	1	25	310	2	30	10	0	0	414	0
	Sig. 11. *Auſt.*			*Adde.*			Sig. 10. *Auſt.*			*Adde.*			Sig. 9. *Auſt.*			*Adde.*			Gr.
	Sig. 5. *Bor.*			*Adde.*			Sig. 4. *Bor.*			*Adde.*			Sig. 3. *Bor.*			*Adde.*			

SERIES OPPOSITIONVM SOLIS ET SATVRNI NOSTRA ÆTATE FACTARVM CVM COMPVTO PRÆCEDENTE COLLATA.

Oppoſitionum Tempora æquata Londini.					*Locus Solis verus.*				*Anom. med. Saturni.*				*Saturnus Heliocentricus comp.*				*Error Comp.*	
		D.	H.	′		°	′	″	s	°	′	″		°	′	″	′	″
1658	*Mart.*	24	17	20	♈	14	35	51	9	10	43	58	♎	14	40	31	+4	40
1659	*Apr.*	6	10	23	♈	26	47	37	9	23	21	30	♎	26	50	9	+2	32
1660	*Apr.*	17	21	50	♉	8	40	56	10	5	58	32	♏	8	43	54	+2	58
1661	*Apr.*	30	5	52	♉	20	21	46	10	18	35	18	♏	20	24	20	+2	34
1662	*Maii*	12	10	55	♊	1	51	53	11	1	11	47	♐	1	54	10	+2	17
1663	*Maii*	24	13	28	♊	13	13	20	11	13	48	7	♐	13	16	29	+3	9
1664	*Jun.*	4	15	16	♊	24	31	10	11	26	24	20	♐	24	34	30	+3	20
1665	*Jun.*	16	16	59	♋	5	47	48	0	9	0	36	♑	5	51	22	+3	34
1666	*Jun.*	28	19	44	♋	17	6	45	0	21	37	0	♑	17	10	29	+3	44
1667	*Julii*	11	0	24	♋	28	31	10	1	4	13	25	♑	28	35	0	+3	50
1668	*Julii*	22	7	53	♌	10	3	56	1	16	50	6	♒	10	8	15	+4	19
1669	*Aug.*	3	19	13	♌	21	48	36	1	29	27	9	♒	21	53	19	+4	43
1670	*Aug.*	16	11	16	♍	3	48	12	2	12	4	34	♓	3	52	54	+4	42
1671	*Aug.*	29	8	58	♍	16	5	49	2	24	42	30	♓	16	9	37	+3	48
1672	*Sept.*	10	12	6	♍	28	41	47	3	7	20	51	♓	28	45	12	+3	25
1673	*Sept.*	23	20	46	♎	11	37	11	3	19	59	41	♈	11	40	45	+3	34
1674	*Oct.*	7	11	27	♎	24	53	10	4	2	38	58	♈	24	56	21	+3	11
1675	*Oct.*	21	7	21	♏	8	28	17	4	15	18	44	♉	8	30	50	+2	33
1676	*Nov.*	3	7	46	♏	22	20	20	4	27	58	54	♉	22	21	51	+1	31
1677	*Nov.*	17	11	27	♐	6	25	25	5	10	39	18	♊	6	25	40	+0	15
1678	*Dec.*	1	16	47	♐	20	38	15	5	23	19	52	♊	20	37	33	−0	42
1679	*Dec.*	15	22	29	♑	4	54	0	6	6	0	25	♋	4	52	3	−1	57
1680	*Dec.*	29	2	51	♑	19	6	40	6	18	40	54	♋	19	3	35	−3	5
1682	*Jan.*	12	4	1	♒	3	9	45	7	1	21	8	♌	3	6	45	−3	0
1683	*Jan.*	26	1	28	♒	17	0	30	7	14	1	0	♌	16	57	8	−3	22
1684	*Feb.*	8	17	58	♓	0	34	35	7	26	40	28	♍	0	31	14	−3	21
1685	*Feb.*	21	5	15	♓	13	50	30	8	9	20	0	♍	13	46	49	−3	41
1686	*Mart.*	6	10	42	♓	26	46	20	8	21	58	4	♍	26	42	52	−3	28
1687	*Mart.*	19	11	12	♈	9	24	20	9	4	36	11	♎	9	19	26	−4	54
1688	*Mart.*	31	6	14	♈	21	43	20	9	17	14	0	♎	21	37	28	−5	52

SERIES OPPOSITIONVM SOLIS ET SATVRNI NOSTRA ÆTATE FACTARVM CVM COMPVTO PRÆCEDENTE COLLATA.

Oppoſitionum Tempora æquata Londini.					*Locus Solis verus.*				*Anom. med. Saturni.*				*Saturnus Heliocentricus comp.*				*Error Comp.*	
		D.	H.	′		°	′	″	S	°	′	″		°	′	″	′	″
1689	*Apr.*	12	20	48	♉	3	46	20	9	29	51	12	♏	3	38	43	−7	37
1690	*Apr.*	25	6	36	♉	15	33	15	10	12	28	5	♏	15	25	16	−7	59
1691	*Maii*	7	13	15	♉	27	8	45	10	25	4	45	♏	26	59	56	−8	49
1692	*Maii*	18	17	16	♊	8	34	50	11	7	41	11	♐	8	25	33	−9	17
1693	*Maii*	30	19	32	♊	19	54	30	11	20	17	28	♐	19	45	11	−9	19
1694	*Jun.*	11	21	8	♋	1	11	10	0	2	53	40	♑	1	2	10	−9	0
1695	*Jun.*	23	23	25	♋	12	29	0	0	15	30	0	♑	12	19	49	−9	11
1696	*Jul.*	5	3	17	♋	23	51	0	0	28	6	22	♑	23	41	16	−9	44
1697	*Jul.*	17	9	21	♌	5	19	30	1	10	42	58	♒	5	9	55	−9	35
1698	*Jul.*	29	18	48	♌	16	58	20	1	23	19	52	♒	16	48	55	−9	25
1699	*Aug.*	11	8	28	♌	28	50	30	2	5	57	4	♒	28	41	5	−9	25
1700	*Aug.*	23	2	52	♍	10	58	0	2	18	34	45	♓	10	49	16	−8	44
1701	*Sept.*	5	2	41	♍	23	23	30	3	1	12	57	♓	23	15	30	−8	0
1702	*Sept.*	18	8	6	♎	6	8	4	3	13	51	22	♈	6	1	12	−6	52
1703	*Oct.*	1	18	59	♎	19	12	0	3	26	30	24	♈	19	7	4	−4	56
1704	*Oct.*	14	12	1	♏	2	37	0	4	9	9	53	♉	2	32	33	−4	27
1705	*Oct.*	28	9	9	♏	16	18	30	4	21	49	45	♉	16	15	48	−2	42
1706	*Nov.*	11	10	2	♐	0	14	15	5	4	29	55	♊	0	13	48	−0	27
1707	*Nov.*	25	13	42	♐	14	21	30	5	17	10	21	♊	14	22	18	+0	48
1708	*Dec.*	8	18	20	♐	28	33	45	5	29	50	51	♊	28	36	8	+2	23
1709	*Dec.*	22	23	2	♑	12	47	20	6	12	31	20	♋	12	49	44	+2	24
1711	*Jan.*	6	1	0	♑	26	53	20	6	25	11	36	♋	26	57	29	+4	9
1712	*Jan.*	20	0	18	♒	10	50	25	7	7	51	37	♌	10	54	36	+4	11
1713	*Feb.*	1	19	0	♒	24	32	10	7	20	31	18	♌	24	36	57	+4	47
1714	*Feb.*	15	8	15	♓	7	55	35	8	3	10	29	♍	8	1	40	+6	5
1715	*Feb.*	28	16	32	♓	21	1	10	8	15	49	18	♍	21	7	20	+6	10
1716	*Mart.*	12	19	6	♈	3	47	0	8	28	27	36	♎	3	53	15	+6	15
1717	*Mart.*	25	16	0	♈	16	13	15	9	11	5	27	♎	16	20	6	+6	51
1718	*Apr.*	7	8	26	♈	28	23	15	9	23	42	55	♎	28	29	14	+5	59
1719	*Apr.*	19	20	20	♉	10	17	20	10	6	20	0	♏	10	22	36	+5	16

MONITUM.

HAbes itaque, Curioſe Aſtrophile, in his Oppoſitionum *Solis* & Planetarum ſuperiorum Seriebus, quaſi Synopſin motuum per ſexaginta Annos continuos, prout in Cœlo viſi ſunt, deſcriptorum, quas ex obſervationibus quæ ſuppetebant accuratioribus, non minore cum fide quam diligentia concinnavimus. Vides etiam Tabulas has noſtras examini ſat rigido ſubjectas: Nec Te moveat quod in *Jove* ſemel ad octo minuta aſſurgat error; in *Saturno* vero aliquando ad decem: Haud aliter enim fieri potuit, abſq; aſſumptis novis Hypotheſibus nondum ſatis perſpectis, & ad Cœlorum Lapidem Lydium probatis. *Jupiter* autem ab Oppoſitione Anni 1677 ad eam Anni 1689 revolutus, juxta indubitatas obſervationes tardior inventus eſt, quam in præcedente vel ſubſequente revolutione, totis duodecim minutis primis. *Saturni* etiam periodus, intra Annos 1668 & 1698 facta, Hebdomade fere totâ brevior erat mediâ ejus revolutione; totidemq; fere Diebus mediâ longior erat altera periodus ab Anno 1689 ad Annum 1719 peracta; ita ut inter durationes earum intercedat differentia pluſquam tredecim dierum. An vero hoc in ſubſequentibus eventurum ſit Poſteris curæ eſto.

Hæc autem oriri a mutuis maximorum Planetarum in ſe invicem actionibus, *Solis* vires centripetas interturbantibus, pluſquam probabile eſt: Nec levi argumento indicatur, quod cum Anno 1683 facta fuerit Conjunctio *Jovis* & *Saturni*, in iis Orbium partibus ubi, ob ſitum Apſidum, proxime accedunt ad invicem Planetæ, junctæ eorum Vires *Saturnum* verſus *Solem*, e contra vero *Jovem* à *Sole* tum maxime urgebant; quapropter *Jupiter*, auctâ velocitate propriâ, ac minutâ vi *Solis* centripetâ, in majorem excurrere debuit Orbem diuturniori periodo abſolvendum: Interea dum *Saturnus*, minutâ velocitate propriâ & majori vi verſus *Solem* preſſus, in minorem Orbem coactus eſſet, ac proinde breviori Tempore revolutus. Si hæc eadem repetitis vicibus Conjunctionem *Jovis* & *Saturni* in *Leone* conſequantur, merito ſperandum eſt errores quos in horum motibus deprehendimus, utpote a trium tantum centrorum efficaciâ oriundi, ope *Geometriæ Neutonianæ* tandem tolli poſſe. Sin minus, ac ſi aliquando evenerint periodi longiores ubi nunc breviſſimi, & è contra, petenda erit cauſa aliqua extrinſecus agens, de qua nondum conſtat. Sed de hac re plura alibi.

TABULARUM
ASTRONOMICARUM
PARS ALTERA
MOTUS PLANETARUM
SECUNDARIORUM;
SIVE
SATELLITUM
JOVIS & SATURNI
EXHIBENS.

EPOCHÆ MEDIORVM MOTVVM QVATVOR SATELLITVM JOVIS.

Annis Julianis ineuntibus.	Primus ab Æquinoct.				Secundus ab Æquinoct.				Tertius ab Æquinoct.				Quartus ab Æquinoct.				*Apſis Quarti* ♒	
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″	°	′
1661	5	21	45	0	11	14	35	0	11	12	8	20	8	24	13	0	4	24
62	9	15	13	40	8	26	23	0	11	18	4	29	7	7	40	20	5	0
63	1	8	42	20	6	8	11	0	11	24	0	38	5	21	7	40	5	36
64	5	2	11	0	3	19	59	0	11	29	56	48	4	4	35	0	6	12
1665	3	19	9	0	4	13	9	30	1	26	12	0	3	9	36	36	6	48
1666	7	12	37	40	1	24	57	30	2	2	8	9	1	23	3	56	7	24
67	11	6	6	20	11	6	45	30	2	8	4	18	0	6	31	16	8	0
68	2	29	35	0	8	18	33	30	2	14	0	28	10	19	58	36	8	36
69	1	16	33	0	9	11	44	0	4	10	15	40	9	25	0	12	9	12
1670	5	10	1	40	6	23	32	0	4	16	11	49	8	8	27	32	9	48
1671	9	3	30	20	4	5	20	0	4	22	7	58	6	21	54	52	10	24
72	0	26	59	0	1	17	8	0	4	28	4	8	5	5	22	12	11	0
73	11	13	57	0	2	10	18	30	6	24	19	20	4	10	23	48	11	36
74	3	7	25	40	11	22	6	30	7	0	15	29	2	23	51	8	12	12
1675	7	0	54	20	9	3	54	30	7	6	11	38	1	7	18	28	12	48
1676	10	24	23	0	6	15	42	30	7	12	7	48	11	20	45	48	13	24
77	9	11	21	0	7	8	53	0	9	8	23	0	10	25	47	24	14	0
78	1	4	49	40	4	20	41	0	9	14	19	9	9	9	14	44	14	36
79	4	28	18	20	2	2	29	0	9	20	15	18	7	22	42	4	15	12
1680	8	21	47	0	11	14	17	0	9	26	11	28	6	6	9	24	15	48
1681	7	8	45	0	0	7	27	30	11	22	26	40	5	11	11	0	16	24
82	11	2	13	40	9	19	15	30	11	28	22	49	3	24	38	20	17	0
83	2	25	42	20	7	1	3	30	0	4	18	58	2	8	5	40	17	36
84	6	19	11	0	4	12	51	30	0	10	15	8	0	21	33	0	18	12
1685	5	6	9	0	5	6	2	0	2	6	30	20	11	26	34	36	18	48
1686	8	29	37	40	2	17	50	0	2	12	26	29	10	10	1	56	19	24
87	0	23	6	20	11	29	38	0	2	18	22	38	8	23	29	16	20	0
88	4	16	35	0	9	11	26	0	2	24	18	48	7	6	56	36	20	36
89	3	3	33	0	10	4	36	30	4	20	34	0	6	11	58	12	21	12
1690	6	27	1	40	7	16	24	30	4	26	30	9	4	25	25	32	21	48
1691	10	20	30	20	4	28	12	30	5	2	26	18	3	8	52	52	22	24
92	2	13	59	0	2	10	0	30	5	8	22	28	1	22	20	12	23	0
93	1	0	57	0	3	3	11	0	7	4	37	40	0	27	21	48	23	36
94	4	24	25	40	0	14	59	0	7	10	33	49	11	10	49	8	24	12
1695	8	17	54	20	9	26	47	0	7	16	29	58	9	24	16	28	24	48

EPOCHÆ MEDIORUM MOTUUM SATELLITUM JOVIS.

Annis Julianis ineuntibus.	Primus ab Æquinoct.				Secundus ab Æquinoct.				Tertius ab Æquinoct.				Quartus ab Æquinoct.				Apſis Quarti ♒		
	s	°	'	''	s	°	'	''	s	°	'	''	s	°	'	''	s	°	'
1696	0	11	23	0	7	8	35	0	7	22	26	8	8	7	43	48		25	24
97	10	28	21	0	8	1	45	30	9	18	41	20	7	12	45	24		26	0
98	2	21	49	40	5	13	33	30	9	24	37	29	5	26	12	44		26	36
99	6	15	18	20	2	25	21	30	10	0	33	38	4	9	40	4		27	12
1700	10	8	47	0	0	7	9	30	10	6	29	48	2	23	7	24		27	48
1701	8	25	45	0	1	0	20	0	0	2	45	0	1	28	9	0		28	24
2	0	19	13	40	10	12	8	0	0	8	41	9	0	11	36	20		29	0
3	4	12	42	20	7	23	56	0	0	14	37	18	10	25	3	40		29	36
4	8	6	11	0	5	5	44	0	0	20	33	28	9	8	31	0	♓	0	12
1705	6	23	9	0	5	28	54	30	2	16	48	40	8	13	32	36		0	48
1706	10	16	37	40	3	10	42	30	2	22	44	49	6	26	59	56		1	24
7	2	10	6	20	0	22	30	30	2	28	40	58	5	10	27	16		2	0
8	6	3	35	0	10	4	18	30	3	4	37	8	3	23	54	36		2	36
9	4	20	33	0	10	27	29	0	5	0	52	20	2	28	56	12		3	12
1710	8	14	1	40	8	9	17	0	5	6	48	29	1	12	23	32		3	48
1711	0	7	30	20	5	21	5	0	5	12	44	38	11	25	50	52		4	24
12	4	0	59	0	3	2	53	0	5	18	40	48	10	9	18	12		5	0
13	2	17	57	0	3	26	3	30	7	14	56	0	9	14	19	48		5	36
14	6	11	25	40	1	7	51	30	7	20	52	9	7	27	47	8		6	12
1715	10	4	54	20	10	19	39	30	7	26	48	18	6	11	14	28		6	48
1716	1	28	23	0	8	1	27	30	8	2	44	28	4	24	41	48		7	24
17	0	15	21	0	8	24	38	0	9	28	59	40	3	29	43	24		8	0
18	4	8	49	40	6	6	26	0	10	4	55	49	2	13	10	44		8	36
19	8	2	18	20	3	18	14	0	10	10	51	58	0	26	38	4		9	12
1720	11	25	47	0	1	0	2	0	10	16	48	8	11	10	5	24		9	48
1721	10	12	45	0	1	23	12	30	0	13	3	20	10	15	7	0		10	24
22	2	6	13	40	11	5	0	30	0	18	59	29	8	28	34	20		11	0
23	5	29	42	20	8	16	48	30	0	24	55	38	7	12	1	40		11	36
24	9	23	11	0	5	28	36	30	1	0	51	48	5	25	29	0		12	12
1725	8	10	9	0	6	21	47	0	2	27	7	0	5	0	30	36		12	48
1726	0	3	37	40	4	3	35	0	3	3	3	9	3	13	57	56		13	24
27	3	27	6	20	1	15	23	0	3	8	59	18	1	27	25	16		14	0
28	7	20	35	0	10	27	11	0	3	14	55	28	0	10	52	36		14	36
29	6	7	33	0	11	20	21	30	5	11	10	40	11	15	54	12		15	12
1730	10	1	1	40	9	2	9	30	5	17	6	49	9	29	21	32		15	48

EPOCHÆ MEDIORUM MOTUUM SATELLITUM JOVIS.

Annis Julianis ineuntibus.	Primus ab Æquinoct.				Secundus ab Æquinoct.				Tertius ab Æquinoct.				Quartus ab Æquinoct.				Apſis Quarti ♓		
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′
1731	1	24	30	20	6	13	57	30	5	23	2	58	8	12	48	52		16	24
32	5	17	59	0	3	25	45	30	5	28	59	8	6	26	16	12		17	0
33	4	4	57	0	4	18	56	0	7	25	14	20	6	1	17	48		17	36
34	7	28	25	40	2	0	44	0	8	1	10	29	4	14	45	8		18	12
1735	11	21	54	20	11	12	32	0	8	7	6	38	2	28	12	28		18	48
1736	3	15	23	0	8	24	20	0	8	13	2	48	1	11	39	48		19	24
37	2	2	21	0	9	17	30	30	10	9	18	0	0	16	41	24		20	0
38	5	25	49	40	6	29	18	30	10	15	14	9	11	0	8	44		20	36
39	9	19	18	20	4	11	6	30	10	21	10	18	9	13	36	4		21	12
1740	1	12	47	0	1	22	54	30	10	27	6	28	7	27	3	24		21	48
1741	11	29	45	0	2	16	5	0	0	23	21	40	7	2	5	0		22	24
42	3	23	13	40	11	27	53	0	0	29	17	49	5	15	32	20		23	0
43	7	16	42	20	9	9	41	0	1	5	13	58	3	28	59	40		23	36
44	11	10	11	0	6	21	29	0	1	11	10	8	2	12	27	0		24	12
1745	9	27	9	0	7	14	39	30	3	7	25	20	1	17	28	36		24	48
1746	1	20	37	40	4	26	27	30	3	13	21	29	0	0	55	56		25	24
47	5	14	6	20	2	8	15	30	3	19	17	38	10	14	23	16		26	0
48	9	7	35	0	11	20	3	30	3	25	13	48	8	27	50	36		26	36
49	7	24	33	0	0	13	14	0	5	21	29	0	8	2	52	12		27	12
1750	11	18	1	40	9	25	2	0	5	27	25	9	6	16	19	32		27	48
1751	3	11	30	20	7	6	50	0	6	3	21	18	4	29	46	52		28	24
52	7	4	59	0	4	18	38	0	6	9	17	28	3	13	14	12		29	0
53	5	21	57	0	5	11	48	30	8	5	32	40	2	18	15	48		29	36
54	9	15	25	40	2	23	36	30	8	11	28	49	1	1	43	8	♈	0	12
1755	1	8	54	20	0	5	24	30	8	17	24	58	11	15	10	28		0	48
1756	5	2	23	0	9	17	12	30	8	23	21	8	9	28	37	48		1	24
57	3	19	21	0	10	10	23	0	10	19	36	20	9	3	39	24		2	0
58	7	12	49	40	7	22	11	0	10	25	32	29	7	17	6	44		2	36
59	11	6	18	20	5	3	59	0	11	1	28	38	6	0	34	4		3	12
1760	2	29	47	0	2	15	47	0	11	7	24	48	4	14	1	24		3	48
1761	1	16	45	0	3	8	57	30	1	3	40	0	3	19	3	0		4	24
62	5	10	13	40	0	20	45	30	1	9	36	9	2	2	30	20		5	0
63	9	3	42	20	10	2	33	30	1	15	32	18	0	15	57	40		5	36
64	0	27	11	0	7	14	21	30	1	21	28	28	10	29	25	0		6	12
1765	11	14	9	0	8	7	32	0	3	17	43	40	10	4	26	36		6	48

MEDII MOTVS SATELLITVM JOVIS AD DIES MENSIS

JANUARII.

Die Menſis.	*Primi*				*Secundi*				*Tertii*				*Quarti*				*Motus Apſis Quarti.*
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″	*Min.*
1	6	23	29	20	3	11	22	29	1	20	19	3	0	21	34	16	
2	1	16	58	40	6	22	44	59	3	10	38	7	1	13	8	32	
3	8	10	28	1	10	4	7	28	5	0	57	10	2	4	42	48	
4	3	3	57	21	1	15	29	57	6	21	16	14	2	26	17	4	
5	9	27	26	41	4	26	52	26	8	11	35	17	3	17	51	20	
6	4	20	56	2	8	8	14	56	10	1	54	20	4	9	25	36	
7	11	14	25	22	11	19	37	25	11	22	13	24	5	0	59	52	
8	6	7	54	42	3	0	59	54	1	12	32	28	5	22	34	8	
9	1	1	24	3	6	12	22	23	3	2	51	31	6	14	8	24	
10	7	24	53	23	9	23	44	53	4	23	10	34	7	5	42	40	1
11	2	18	22	43	1	5	7	22	6	13	29	38	7	27	16	56	
12	9	11	52	4	4	16	29	51	8	3	48	41	8	18	51	12	
13	4	5	21	24	7	27	52	21	9	24	7	45	9	10	25	28	
14	10	28	50	44	11	9	14	50	11	14	26	48	10	1	59	44	
15	5	22	20	5	2	20	37	19	1	4	45	52	10	23	34	0	
16	0	15	49	25	6	1	59	48	2	25	4	55	11	15	8	16	
17	7	9	18	45	9	13	22	17	4	15	23	59	0	6	42	32	
18	2	2	48	6	0	24	44	47	6	5	43	2	0	28	16	48	
19	8	26	17	26	4	6	7	16	7	26	2	6	1	19	51	4	
20	3	19	46	46	7	17	29	45	9	16	21	9	2	11	25	20	
21	10	13	16	7	10	28	52	14	11	6	40	12	3	2	59	36	2
22	5	6	45	27	2	10	14	44	0	26	59	16	3	24	33	52	
23	0	0	14	47	5	21	37	13	2	17	18	19	4	16	8	8	
24	6	23	44	8	9	2	59	42	4	7	37	23	5	7	42	24	
25	1	17	13	28	0	14	22	12	5	27	56	26	5	29	16	40	
26	8	10	42	48	3	25	44	41	7	18	15	29	6	20	50	56	
27	3	4	12	9	7	7	7	10	9	8	34	33	7	12	25	12	
28	9	27	41	29	10	18	29	39	10	28	53	36	8	3	59	28	
29	4	21	10	49	1	29	52	9	0	19	12	40	8	25	33	44	
30	11	14	40	10	5	11	14	38	2	9	31	43	9	17	8	0	
31	6	8	9	30	8	22	37	7	3	29	50	47	10	8	42	16	3

MEDII MOTUS SATELLITUM JOVIS AD DIES MENSIS

FEBRUARII.

Dies Menſis	Primi				Secundi				Tertii				Quarti				Motus Apſis Quarti.
	s	°	'	''	s	°	'	''	s	°	'	''	s	°	'	''	Min.
1	1	1	38	50	0	3	59	36	5	20	9	51	11	0	16	32	
2	7	25	8	11	3	15	22	6	7	10	28	54	11	21	50	48	
3	2	18	37	31	6	26	44	35	9	0	47	58	0	13	25	4	
4	9	12	6	51	10	8	7	4	10	21	7	1	1	4	59	20	
5	4	5	36	12	1	19	29	33	0	11	26	4	1	26	33	36	
6	10	29	5	32	5	0	52	3	2	1	45	8	2	18	7	52	
7	5	22	34	52	8	12	14	32	3	22	4	11	3	9	42	8	
8	0	16	4	13	11	23	37	1	5	12	23	15	4	1	16	24	
9	7	9	33	33	3	4	59	30	7	2	42	18	4	22	50	40	
10	2	3	2	53	6	16	22	0	8	23	1	21	5	14	24	56	
11	8	26	32	14	9	27	44	29	10	13	20	25	6	5	59	12	4
12	3	20	1	34	1	9	6	58	0	3	39	28	6	27	33	28	
13	10	13	30	54	4	20	29	27	1	23	58	32	7	19	7	44	
14	5	7	0	15	8	1	51	56	3	14	17	35	8	10	42	0	
15	0	0	29	35	11	13	14	26	5	4	36	38	9	2	16	16	
16	6	23	58	55	2	24	36	55	6	24	55	42	9	23	50	32	
17	1	17	28	16	6	5	59	24	8	15	14	45	10	15	24	48	
18	8	10	57	36	9	17	21	54	10	5	33	49	11	6	59	4	
19	3	4	26	56	0	28	44	23	11	25	52	52	11	28	33	20	
20	9	27	56	17	4	10	6	52	1	16	11	56	0	20	7	36	
21	4	21	25	37	7	21	29	22	3	6	30	59	1	11	41	52	5
22	11	14	54	57	11	2	51	51	4	26	50	3	2	3	16	8	
23	6	8	24	18	2	14	14	20	6	17	9	7	2	24	50	24	
24	1	1	53	38	5	25	36	49	8	7	28	10	3	16	24	40	
25	7	25	22	58	9	6	59	19	9	27	47	13	4	7	58	56	
26	2	18	52	19	0	18	21	48	11	18	6	17	4	29	33	12	
27	9	12	21	39	3	29	44	17	1	8	25	20	5	21	7	28	
28	4	5	50	59	7	11	6	46	2	28	44	24	6	12	41	44	

In Anno Biſſextili *poſt* Februarium *adde unius Diei Motum.*

MEDII MOTVS SATELLITVM JOVIS AD DIES MENSIS

MARTII.

Die Mensis.	*Primi*				*Secundi*				*Tertii*				*Quarti*				Motus Apsis Quarti.
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″	Min.
1	10	29	20	20	10	22	29	16	4	19	3	27	7	4	16	0	
2	5	22	49	40	2	3	51	45	6	9	22	30	7	25	50	16	
3	0	16	19	0	5	15	14	14	7	29	41	34	8	17	24	32	
4	7	9	48	21	8	26	36	44	9	20	0	37	9	8	58	48	6
5	2	3	17	41	0	7	59	13	11	10	19	41	10	0	33	4	
6	8	26	47	1	3	19	21	42	1	0	38	44	10	22	7	20	
7	3	20	16	22	7	0	44	12	2	20	57	47	11	13	41	36	
8	10	13	45	42	10	12	6	41	4	11	16	51	0	5	15	52	
9	5	7	15	2	1	23	29	10	6	1	35	54	0	26	50	8	
10	0	0	44	23	5	4	51	39	7	21	54	58	1	18	24	24	
11	6	24	13	43	8	16	14	8	9	12	14	1	2	9	58	40	
12	1	17	43	3	11	27	36	38	11	2	33	5	3	1	32	56	
13	8	11	12	24	3	8	59	7	0	22	52	8	3	23	7	12	
14	3	4	41	44	6	20	21	36	2	13	11	12	4	14	41	28	7
15	9	28	11	4	10	1	44	5	4	3	30	15	5	6	15	44	
16	4	21	40	25	1	13	6	35	5	23	49	19	5	27	50	0	
17	11	15	9	45	4	24	29	4	7	14	8	23	6	19	24	16	
18	6	8	39	5	8	5	51	33	9	4	27	26	7	10	58	32	
19	1	2	8	26	11	17	14	2	10	24	46	29	8	2	32	48	
20	7	25	37	46	2	28	36	32	0	15	5	33	8	24	7	4	
21	2	19	7	6	6	9	59	1	2	5	24	36	9	15	41	20	
22	9	12	36	27	9	21	21	30	3	25	43	39	10	7	15	36	
23	4	6	5	47	1	2	43	59	5	16	2	43	10	28	49	52	
24	10	29	35	7	4	14	6	29	7	6	21	46	11	20	24	8	
25	5	23	4	28	7	25	28	58	8	26	40	50	0	11	58	24	8
26	0	16	33	48	11	6	51	27	10	16	59	53	1	3	32	40	
27	7	10	3	8	2	18	13	57	0	7	18	57	1	25	6	56	
28	2	3	32	29	5	29	36	26	1	27	38	0	2	16	41	12	
29	8	27	1	49	9	10	58	55	3	17	57	4	3	8	15	28	
30	3	20	31	9	0	22	21	24	5	8	16	7	3	29	49	44	
31	10	14	0	30	4	3	43	54	6	28	35	11	4	21	24	0	

MEDII MOTUS SATELLITUM JOVIS AD DIES MENSIS

APRILIS.

Die Menſis.	Primi				Secundi				Tertii				Quarti				Motus Apſidis Quarti.
	S	°	′	″	S	°	′	″	S	°	′	″	S	°	′	″	Min.
1	5	7	29	50	7	15	6	23	8	18	54	14	5	12	58	16	
2	0	0	59	10	10	26	28	52	10	9	13	18	6	4	32	32	9
3	6	24	28	31	2	7	51	21	11	29	32	21	6	26	6	48	
4	1	17	57	51	5	19	13	51	1	19	51	24	7	17	41	4	
5	8	11	27	11	9	0	36	20	3	10	10	28	8	9	15	20	
6	3	4	56	32	0	11	58	49	5	0	29	31	9	0	49	36	
7	9	28	25	52	3	23	21	18	6	20	48	35	9	22	23	52	
8	4	21	55	12	7	4	43	47	8	11	7	38	10	13	58	8	
9	11	15	24	33	10	16	6	17	10	1	26	42	11	5	32	24	
10	6	8	53	53	1	27	28	46	11	21	45	45	11	27	6	40	
11	1	2	23	13	5	8	51	15	1	12	4	49	0	18	40	56	
12	7	25	52	34	8	20	13	44	3	2	23	52	1	10	15	12	10
13	2	19	21	54	0	1	36	14	4	22	42	55	2	1	49	28	
14	9	12	51	14	3	12	58	43	6	13	1	59	2	23	23	44	
15	4	6	20	35	6	24	21	12	8	3	21	2	3	14	58	0	
16	10	29	49	55	10	5	43	41	9	23	40	6	4	6	32	16	
17	5	23	19	15	1	17	6	11	11	13	59	9	4	28	6	32	
18	0	16	48	36	4	28	28	40	1	4	18	13	5	19	40	48	
19	7	10	17	56	8	9	51	9	2	24	37	16	6	11	15	4	
20	2	3	47	16	11	21	13	38	4	14	56	20	7	2	49	20	
21	8	27	16	37	3	2	36	8	6	5	15	23	7	24	23	36	
22	3	20	45	57	6	13	58	37	7	25	34	27	8	15	57	52	11
23	10	14	15	17	9	25	21	6	9	15	53	30	9	7	32	8	
24	5	7	44	38	1	6	43	35	11	6	12	33	9	29	6	24	
25	0	1	13	58	4	18	6	5	0	26	31	37	10	20	40	40	
26	6	24	43	18	7	29	28	34	2	16	50	40	11	12	14	56	
27	1	18	12	39	11	10	51	3	4	7	9	44	0	3	49	12	
28	8	11	41	59	2	22	13	33	5	27	28	47	0	25	23	28	
29	3	5	11	19	6	3	36	2	7	17	47	51	1	16	57	44	
30	9	28	40	40	9	14	58	31	9	8	6	54	2	8	32	0	

MEDII MOTVS SATELLITVM JOVIS AD DIES MENSIS

MAII.

Die Mensis.	Primi				Secundi				Tertii				Quarti				Motus Apſidis Quarti.
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″	Min.
1	4	22	10	0	0	26	21	0	10	28	25	57	3	0	6	16	
2	11	15	39	20	4	7	43	30	0	18	45	0	3	21	40	32	12
3	6	9	8	41	7	19	5	59	2	9	4	4	4	13	14	48	
4	1	2	38	1	11	0	28	28	3	29	23	8	5	4	49	4	
5	7	26	7	21	2	11	50	57	5	19	42	11	5	26	23	20	
6	2	19	36	42	5	23	13	27	7	10	1	15	6	17	57	36	
7	9	13	6	2	9	4	35	56	9	0	20	18	7	9	31	52	
8	4	6	35	22	0	15	58	25	10	20	39	22	8	1	6	8	
9	11	0	4	43	3	27	20	54	0	10	58	25	8	22	40	24	
10	5	23	34	3	7	8	43	24	2	1	17	29	9	14	14	40	
11	0	17	3	23	10	20	5	53	3	21	36	32	10	5	48	56	
12	7	10	32	44	2	1	28	22	5	11	55	36	10	27	23	12	13
13	2	4	2	4	5	12	50	52	7	2	14	39	11	18	57	28	
14	8	27	31	24	8	24	13	21	8	22	33	42	0	10	31	44	
15	3	21	0	45	0	5	35	50	10	12	52	46	1	2	6	0	
16	10	14	30	5	3	16	58	19	0	3	11	49	1	23	40	16	
17	5	7	59	25	6	28	20	49	1	23	30	52	2	15	14	32	
18	0	1	28	46	10	9	43	18	3	13	49	56	3	6	48	48	
19	6	24	58	6	1	21	5	47	5	4	9	0	3	28	23	4	
20	1	18	27	26	5	2	28	16	6	24	28	3	4	19	57	20	
21	8	11	56	47	8	13	50	46	8	14	47	7	5	11	31	36	
22	3	5	26	7	11	25	13	15	10	5	6	10	6	3	5	52	14
23	9	28	55	27	3	6	35	44	11	25	25	14	6	24	40	8	
24	4	22	24	48	6	17	58	13	1	15	44	17	7	16	14	24	
25	11	15	54	8	9	29	20	43	3	6	3	21	8	7	48	40	
26	6	9	23	28	1	10	43	12	4	26	22	24	8	29	22	56	
27	1	2	52	49	4	22	5	41	6	16	41	28	9	20	57	12	
28	7	26	22	9	8	3	28	11	8	7	0	31	10	12	31	28	
29	2	19	51	29	11	14	50	40	9	27	19	35	11	4	5	44	
30	9	13	20	50	2	26	13	9	11	17	38	38	11	25	40	0	
31	4	6	50	10	6	7	35	38	1	7	57	41	0	17	14	16	

MEDII MOTUS SATELLITUM JOVIS AD DIES MENSIS

JUNII.

Die Menſis.	*Primi*				*Secundi*				*Tertii*				*Quarti*				*Motus Apſidis Quarti.*
	s	°	'	''	s	°	'	''	s	°	'	''	s	°	'	''	*Min.*
1	11	0	19	30	9	18	58	8	2	28	16	44	1	8	48	32	
2	5	23	48	51	1	0	20	37	4	18	35	48	2	0	22	48	15
3	0	17	18	11	4	11	43	6	6	8	54	51	2	21	57	4	
4	7	10	47	31	7	23	5	35	7	29	13	55	3	13	31	20	
5	2	4	16	52	11	4	28	5	9	19	32	58	4	5	5	36	
6	8	27	46	12	2	15	50	34	11	9	52	2	4	26	39	52	
7	3	21	15	32	5	27	13	3	1	0	11	5	5	18	14	8	
8	10	14	44	53	9	8	35	32	2	20	30	9	6	9	48	24	
9	5	8	14	13	0	19	58	1	4	10	49	12	7	1	22	40	
10	0	1	43	33	4	1	20	31	6	1	8	16	7	22	56	56	
11	6	25	12	54	7	12	43	0	7	21	27	19	8	14	31	12	16
12	1	18	42	14	10	24	5	29	9	11	46	23	9	6	5	28	
13	8	12	11	34	2	5	27	59	11	2	5	26	9	27	39	44	
14	3	5	40	55	5	16	50	28	0	22	24	30	10	19	14	0	
15	9	29	10	15	8	28	12	57	2	12	43	33	11	10	48	16	
16	4	22	39	35	0	9	35	26	4	3	2	36	0	2	22	32	
17	11	16	8	56	3	20	57	56	5	23	21	40	0	23	56	48	
18	6	9	38	16	7	2	20	25	7	13	40	43	1	15	31	4	
19	1	3	7	36	10	13	42	54	9	3	59	46	2	7	5	20	
20	7	26	36	57	1	25	5	23	10	24	18	50	2	28	39	36	
21	2	20	6	17	5	6	27	53	0	14	37	53	3	20	13	52	
22	9	13	35	37	8	17	50	22	2	4	56	56	4	11	48	8	17
23	4	7	4	58	11	29	12	51	3	25	16	0	5	3	22	24	
24	11	0	34	18	3	10	35	20	5	15	35	3	5	24	56	40	
25	5	24	3	38	6	21	57	50	7	5	54	7	6	16	30	56	
26	0	17	32	59	10	3	20	19	8	26	13	11	7	8	5	12	
27	7	11	2	19	1	14	42	48	10	16	32	14	7	29	39	28	
28	2	4	31	39	4	26	5	17	0	6	51	18	8	21	13	44	
29	8	28	0	59	8	7	27	47	1	27	10	21	9	12	48	0	
30	3	21	30	20	11	18	50	16	3	17	29	25	10	4	22	16	

MEDII MOTVS SATELLITVM JOVIS AD DIES MENSIS

JULII.

Die Menſis.	Primi				Secundi				Tertii				Quarti				Motus Apſidis Quarti.
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″	Min.
1	10	14	59	40	3	0	12	45	5	7	48	28	10	25	56	32	
2	5	8	29	0	6	11	35	14	6	28	7	31	11	17	30	48	18
3	0	1	58	20	9	22	57	44	8	18	26	35	0	9	5	4	
4	6	25	27	40	1	4	20	13	10	8	45	38	1	0	39	20	
5	1	18	57	1	4	15	42	42	11	29	4	42	1	22	13	36	
6	8	12	26	21	7	27	5	11	1	19	23	45	2	13	47	52	
7	3	5	55	41	11	8	27	41	3	9	42	49	3	5	22	8	
8	9	29	25	2	2	19	50	10	5	0	1	52	3	26	56	24	
9	4	22	54	22	6	1	12	39	6	20	20	55	4	18	30	40	
10	11	16	23	42	9	12	35	9	8	10	39	59	5	10	4	56	
11	6	9	53	3	0	23	57	38	10	0	59	2	6	1	39	12	
12	1	3	22	23	4	5	20	7	11	21	18	6	6	23	13	28	19
13	7	26	51	43	7	16	42	36	1	11	37	9	7	14	47	44	
14	2	20	21	4	10	28	5	6	3	1	56	13	8	6	22	0	
15	9	13	50	24	2	9	27	35	4	22	15	16	8	27	56	16	
16	4	7	19	44	5	20	50	4	6	12	34	19	9	19	30	32	
17	11	0	49	5	9	2	12	33	8	2	53	23	10	11	4	48	
18	5	24	18	25	0	13	35	3	9	23	12	27	11	2	39	4	
19	0	17	47	45	3	24	57	32	11	13	31	30	11	24	13	20	
20	7	11	17	6	7	6	20	1	1	3	50	34	0	15	47	36	
21	2	4	46	26	10	17	42	30	2	24	9	37	1	7	21	52	
22	8	28	15	46	1	29	5	0	4	14	28	41	1	28	56	8	20
23	3	21	45	7	5	10	27	29	6	4	47	44	2	20	30	24	
24	10	15	14	27	8	21	49	58	7	25	6	48	3	12	4	40	
25	5	8	43	47	0	3	12	28	9	15	25	51	4	3	38	56	
26	0	2	13	8	3	14	34	57	11	5	44	54	4	25	13	12	
27	6	25	42	28	6	25	57	26	0	26	3	58	5	16	47	28	
28	1	19	11	48	10	7	19	55	2	16	23	1	6	8	21	44	
29	8	12	41	9	1	18	42	25	4	6	42	4	6	29	56	0	
30	3	6	10	29	5	0	4	54	5	27	1	8	7	21	30	16	
31	9	29	39	49	8	11	27	23	7	17	20	12	8	13	4	32	

MEDII MOTVS SATELLITVM JOVIS AD DIES MENSIS

AUGUSTI.

Die Menſis.	Primi				Secundi				Tertii				Quarti				Motus Apſidis Quarti.
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″	Min.
1	4	23	9	10	11	22	49	52	9	7	39	16	9	4	38	48	21
2	11	16	38	30	3	4	12	22	10	27	58	19	9	26	13	4	
3	6	10	7	50	6	15	34	51	0	18	17	22	10	17	47	20	
4	1	3	37	11	9	26	57	20	2	8	36	26	11	9	21	36	
5	7	27	6	31	1	8	19	49	3	28	55	29	0	0	55	52	
6	2	20	35	51	4	19	42	18	5	19	14	33	0	22	30	8	
7	9	14	5	12	8	1	4	48	7	9	33	36	1	14	4	24	
8	4	7	34	32	11	12	27	17	8	29	52	39	2	5	38	40	
9	11	1	3	52	2	23	49	46	10	20	11	43	2	27	12	56	
10	5	24	33	13	6	5	12	16	0	10	30	46	3	18	47	12	
11	0	18	2	33	9	16	34	45	2	0	49	50	4	10	21	28	22
12	7	11	31	53	0	27	57	14	3	21	8	53	5	1	55	44	
13	2	5	1	14	4	9	19	43	5	11	27	56	5	23	30	0	
14	8	28	30	34	7	20	42	13	7	1	47	0	6	15	4	16	
15	3	21	59	54	11	2	4	42	8	22	6	3	7	6	38	32	
16	10	15	29	15	2	13	27	11	10	12	25	7	7	28	12	48	
17	5	8	58	35	5	24	49	41	0	2	44	10	8	19	47	4	
18	0	2	27	55	9	6	12	10	1	23	3	14	9	11	21	20	
19	6	25	57	16	0	17	34	39	3	13	22	17	10	2	55	36	
20	1	19	26	36	3	28	57	8	5	3	41	21	10	24	29	52	
21	8	12	55	56	7	10	19	38	6	24	0	24	11	16	4	8	
22	3	6	25	17	10	21	42	7	8	14	19	28	0	7	38	24	23
23	9	29	54	37	2	3	4	36	10	4	38	31	0	29	12	40	
24	4	23	23	57	5	14	27	5	11	24	57	35	1	20	46	56	
25	11	16	53	18	8	25	49	35	1	15	16	38	2	12	21	12	
26	6	10	22	38	0	7	12	4	3	5	35	42	3	3	55	28	
27	1	3	51	58	3	18	34	33	4	25	54	45	3	25	29	44	
28	7	27	21	19	6	29	57	2	6	16	13	48	4	17	4	0	
29	2	20	50	39	10	11	19	32	8	6	32	52	5	8	38	16	
30	9	14	19	59	1	22	42	1	9	26	51	55	6	0	12	32	
31	4	7	49	20	5	4	4	30	11	17	10	59	6	21	46	48	

MEDII MOTVS SATELLITVM JOVIS AD DIES MENSIS

SEPTEMBRIS.

Die Mensis.	*Primi*				*Secundi*				*Tertii*				*Quarti*				*Motus Apſidis Quarti.*
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″	*Min.*
1	11	1	18	40	8	15	26	59	1	7	30	2	7	13	21	4	24
2	5	24	48	0	11	26	49	29	2	27	49	5	8	4	55	20	
3	0	18	17	21	3	8	11	58	4	18	8	9	8	26	29	36	
4	7	11	46	41	6	19	34	27	6	8	27	12	9	18	3	52	
5	2	5	16	1	10	0	56	57	7	28	46	16	10	9	38	8	
6	8	28	45	22	1	12	19	26	9	19	5	19	11	1	12	24	
7	3	22	14	42	4	23	41	55	11	9	24	23	11	22	46	40	
8	10	15	44	2	8	5	4	24	0	29	43	26	0	14	20	56	
9	5	9	13	23	11	16	26	54	2	20	2	30	1	5	55	12	
10	0	2	42	43	2	27	49	23	4	10	21	33	1	27	29	28	
11	6	26	12	3	6	9	11	52	6	0	40	37	2	19	3	44	25
12	1	19	41	24	9	20	34	21	7	20	59	40	3	10	38	0	
13	8	13	10	44	1	1	56	51	9	11	18	44	4	2	12	16	
14	3	6	40	4	4	13	19	20	11	1	37	47	4	23	46	32	
15	10	0	9	25	7	24	41	49	0	21	56	51	5	15	20	48	
16	4	23	38	45	11	6	4	18	2	12	15	54	6	6	55	4	
17	11	17	8	5	2	17	26	48	4	2	34	57	6	28	29	20	
18	6	10	37	26	5	28	49	17	5	22	54	0	7	20	3	36	
19	1	4	6	46	9	10	11	46	7	13	13	4	8	11	37	52	
20	7	27	36	6	0	21	34	15	9	3	32	7	9	3	12	8	
21	2	21	5	27	4	2	56	45	10	23	51	11	9	24	46	24	
22	9	14	34	47	7	14	19	14	0	14	10	14	10	16	20	40	26
23	4	8	4	7	10	25	41	43	2	4	29	18	11	7	54	56	
24	11	1	33	28	2	7	4	12	3	24	48	21	11	29	29	12	
25	5	25	2	48	5	18	26	42	5	15	7	25	0	21	3	28	
26	0	18	32	8	8	29	49	11	7	5	26	28	1	12	37	44	
27	7	12	1	29	0	11	11	40	8	25	45	32	2	4	12	0	
28	2	5	30	49	3	22	34	9	10	16	4	35	2	25	46	16	
29	8	29	0	9	7	3	56	39	0	6	23	39	3	17	20	32	
30	3	22	29	30	10	15	19	8	1	26	42	42	4	8	54	48	

MEDII MOTVS SATELLITVM JOVIS AD DIES MENSIS

OCTOBRIS.

Die Menſis.	Primi				Secundi				Tertii				Quarti				Motus Apſidis Quarti.
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″	Min.
1	10	15	58	50	1	26	41	37	3	17	1	46	5	0	29	4	
2	5	9	28	10	5	8	4	6	5	7	20	49	5	22	3	20	27
3	0	2	57	31	8	19	26	36	6	27	39	53	6	13	37	36	
4	6	26	26	51	0	0	49	5	8	17	58	56	7	5	11	52	
5	1	19	56	11	3	12	11	34	10	8	18	0	7	26	46	8	
6	8	13	25	32	6	23	34	4	11	28	37	3	8	18	20	24	
7	3	6	54	52	10	4	56	33	1	18	56	6	9	9	54	40	
8	10	0	24	12	1	16	19	2	3	9	15	10	10	1	28	56	
9	4	23	53	33	4	27	41	31	4	29	34	13	10	23	3	12	
10	11	17	22	53	8	9	4	1	6	19	53	17	11	14	37	28	
11	6	10	52	13	11	20	26	30	8	10	12	20	0	6	11	44	
12	1	4	21	34	3	1	48	59	10	0	31	24	0	27	46	0	28
13	7	27	50	54	6	13	11	28	11	20	50	27	1	19	20	16	
14	2	21	20	14	9	24	33	58	1	11	9	31	2	10	54	32	
15	9	14	49	35	1	5	56	27	3	1	28	34	3	2	28	48	
16	4	8	18	55	4	17	18	56	4	21	47	38	3	24	3	4	
17	11	1	48	15	7	28	41	25	6	12	6	41	4	15	37	20	
18	5	25	17	36	11	10	3	55	8	2	25	45	5	7	11	36	
19	0	18	46	56	2	21	26	24	9	22	44	48	5	28	45	52	
20	7	12	16	16	6	2	48	53	11	13	3	51	6	20	20	8	
21	2	5	45	37	9	14	11	22	1	3	22	55	7	11	54	24	
22	8	29	14	57	0	25	33	52	2	23	41	58	8	3	28	40	
23	3	22	44	17	4	6	56	21	4	14	1	2	8	25	2	56	29
24	10	16	13	38	7	18	18	50	6	4	20	5	9	16	37	12	
25	5	9	42	58	10	29	41	19	7	24	39	8	10	8	11	28	
26	0	3	12	18	2	11	3	49	9	14	58	12	10	29	45	44	
27	6	26	41	39	5	22	26	18	11	5	17	15	11	21	20	0	
28	1	20	10	59	9	3	48	47	0	25	36	19	0	12	54	16	
29	8	13	40	19	0	15	11	17	2	15	55	22	1	4	28	32	
30	3	7	9	40	3	26	33	46	4	6	14	26	1	26	2	48	
31	10	0	39	0	7	7	56	15	5	26	33	29	2	17	37	4	

MEDII MOTVS SATELLITVM JOVIS AD DIES MENSIS

NOVEMBRIS.

Die Menſis.	*Primi*				*Secundi*				*Tertii*				*Quarti*				*Motus Apſidis Quarti.*
	S	°	′	″	S	°	′	″	S	°	′	″	S	°	′	″	*Min.*
1	4	24	8	20	10	19	18	44	7	16	52	33	3	9	11	20	30
2	11	17	37	41	2	0	41	14	9	7	11	36	4	0	45	36	
3	6	11	7	1	5	12	3	43	10	27	30	40	4	22	19	52	
4	1	4	36	21	8	23	26	12	0	17	49	43	5	13	54	8	
5	7	28	5	42	0	4	48	41	2	8	8	47	6	5	28	24	
6	2	21	35	2	3	16	11	11	3	28	27	50	6	27	2	40	
7	9	15	4	22	6	27	33	40	5	18	46	54	7	18	36	56	
8	4	8	33	43	10	8	56	9	7	9	5	57	8	10	11	12	
9	11	2	3	3	1	20	18	38	8	29	25	0	9	1	45	28	
10	5	25	32	23	5	1	41	8	10	19	44	4	9	23	19	44	
11	0	19	1	44	8	13	3	37	0	10	3	7	10	14	54	0	31
12	7	12	31	4	11	24	25	6	2	0	22	11	11	6	28	16	
13	2	6	0	24	3	5	48	35	3	20	41	14	11	28	2	32	
14	8	29	29	45	6	17	11	5	5	11	0	17	0	19	36	48	
15	3	22	59	5	9	28	33	34	7	1	19	21	1	11	11	4	
16	10	16	28	25	1	9	56	3	8	21	38	24	2	2	45	20	
17	5	9	57	46	4	21	18	32	10	11	57	28	2	24	19	36	
18	0	3	27	6	8	2	41	2	0	2	16	31	3	15	53	52	
19	6	26	56	26	11	14	3	31	1	22	35	35	4	7	28	8	
20	1	20	25	47	2	25	26	0	3	12	54	38	4	29	2	24	
21	8	13	55	7	6	6	48	30	5	3	13	42	5	20	36	40	32
22	3	7	24	27	9	18	10	59	6	23	32	45	6	12	10	56	
23	10	0	53	48	0	29	33	28	8	13	51	49	7	3	45	12	
24	4	24	23	8	4	10	55	57	10	4	10	52	7	25	19	28	
25	11	17	52	28	7	22	18	27	11	24	29	56	8	16	53	44	
26	6	11	21	49	11	3	40	56	1	14	48	59	9	8	28	0	
27	1	4	51	9	2	15	3	25	3	5	8	3	10	0	2	16	
28	7	28	20	29	5	26	25	54	4	25	27	6	10	21	36	32	
29	2	21	49	50	9	7	48	24	6	15	46	9	11	13	10	48	
30	9	15	19	10	0	19	10	53	8	6	5	13	0	4	45	4	

MEDII MOTUS SATELLITUM JOVIS AD DIES MENSIS

DECEMBRIS.

Die Menſis.	*Primi*				*Secundi*				*Tertii*				*Quarti*				*Motus Apſidis Quarti.*
	s	°	′	″	s	°	′	″	s	°	′	″	s	°	′	″	*Min.*
1	4	8	48	30	4	0	33	22	9	26	24	16	0	26	19	20	33
2	11	2	17	51	7	11	55	52	11	16	43	20	1	17	53	36	
3	5	25	47	11	10	23	18	21	1	7	2	23	2	9	27	52	
4	0	19	16	31	2	4	40	50	2	27	21	26	3	1	2	8	
5	7	12	45	52	5	16	3	19	4	17	40	30	3	22	36	24	
6	2	6	15	12	8	27	25	49	6	7	59	33	4	14	10	40	
7	8	29	44	32	0	8	48	18	7	28	18	37	5	5	44	56	
8	3	23	13	53	3	20	10	47	9	18	37	40	5	27	19	12	
9	10	16	43	13	7	1	33	16	11	8	56	44	6	18	53	28	
10	5	10	12	33	10	12	55	46	0	29	15	47	7	10	27	44	
11	0	3	41	54	1	24	18	15	2	19	34	51	8	2	2	0	34
12	6	27	11	14	5	5	40	44	4	9	53	54	8	23	36	16	
13	1	20	40	34	8	17	3	14	6	0	12	58	9	15	10	32	
14	8	14	9	55	11	28	25	43	7	20	32	1	10	6	44	48	
15	3	7	39	15	3	9	48	12	9	10	51	5	10	28	19	4	
16	10	1	8	35	6	21	10	41	11	1	10	8	11	19	53	20	
17	4	24	37	56	10	2	33	11	0	21	29	12	0	11	27	36	
18	11	18	7	16	1	13	55	40	2	11	48	15	1	3	1	52	
19	6	11	36	36	4	25	18	9	4	2	7	18	1	24	36	8	
20	1	5	5	57	8	6	40	38	5	22	26	22	2	16	10	24	
21	7	28	35	17	11	18	3	8	7	12	45	25	3	7	44	40	35
22	2	22	4	37	2	29	25	37	9	3	4	29	3	29	18	56	
23	9	15	33	58	6	10	48	6	10	23	23	32	4	20	53	12	
24	4	9	3	18	9	22	10	35	0	13	42	36	5	12	27	28	
25	11	2	32	38	1	3	33	5	2	4	1	39	6	4	1	44	
26	5	26	1	58	4	14	55	34	3	24	20	43	6	25	36	0	
27	0	19	31	18	7	26	18	3	5	14	39	47	7	17	10	16	
28	7	13	0	38	11	7	40	32	7	4	58	50	8	8	44	32	
29	2	6	29	59	2	19	3	2	8	25	17	53	9	0	18	48	
30	8	29	59	19	6	0	25	31	10	15	36	57	9	21	53	4	
31	3	23	28	40	9	11	48	0	0	5	56	0	10	13	27	20	36

MEDII MOTVS SATELLITVM JOVIS IN ANNORVM CENTVRIIS.

Annis Collectis	Primi				Secundi				Tertii				Quarti			
	s	°	'	''	s	°	'	''	s	°	'	''	s	°	'	''
100	7	25	0	0	3	24	22	30	1	21	31	40	6	24	50	0
200	3	20	0	0	7	18	45	0	3	13	3	20	1	19	40	0
300	11	15	0	0	11	13	7	30	5	4	35	0	8	14	30	0

In centum autem Annis progreditur Apſis Quarti duo Signa.

IN HORIS.

H.	s	°	'	''	s	°	'	''	s	°	'	''	s	°	'	''
1	0	8	28	43	0	4	13	26	0	2	5	48	0	0	53	56
2	0	16	57	27	0	8	26	52	0	4	11	35	0	1	47	52
3	0	25	26	10	0	12	40	18	0	6	17	23	0	2	41	47
4	1	3	54	53	0	16	53	44	0	8	23	11	0	3	35	43
5	1	12	23	37	0	21	7	10	0	10	28	58	0	4	29	39
6	1	20	52	20	0	25	20	37	0	12	34	46	0	5	23	34
7	1	29	21	3	0	29	34	3	0	14	40	34	0	6	17	30
8	2	7	49	47	1	3	47	29	0	16	46	21	0	7	11	26
9	2	16	18	30	1	8	0	55	0	18	52	9	0	8	5	21
10	2	24	47	13	1	12	14	21	0	20	57	56	0	8	59	17
11	3	3	15	57	1	16	27	47	0	23	3	44	0	9	53	13
12	3	11	44	40	1	20	41	14	0	25	9	32	0	10	47	8
13	3	20	13	23	1	24	54	40	0	27	15	20	0	11	41	4
14	3	28	42	7	1	29	8	6	0	29	21	7	0	12	35	0
15	4	7	10	50	2	3	21	32	1	1	26	55	0	13	28	55
16	4	15	39	33	2	7	34	58	1	3	32	43	0	14	22	51
17	4	24	8	17	2	11	48	24	1	5	38	30	0	15	16	47
18	5	2	37	0	2	16	1	51	1	7	44	18	0	16	10	42
19	5	11	5	43	2	20	15	17	1	9	50	6	0	17	4	38
20	5	19	34	27	2	24	28	43	1	11	55	53	0	17	58	34
21	5	28	3	10	2	28	42	9	1	14	1	41	0	18	52	29
22	6	6	31	53	3	2	55	35	1	16	7	28	0	19	46	25
23	6	15	0	37	3	7	9	1	1	18	13	16	0	20	40	21
24	6	23	29	20	3	11	22	28	1	20	19	3	0	21	34	16

MEDII MOTVS SATELLITVM JOVIS IN MINVTIS HORARIIS.

	Primi			Secundi			Tertii			Quarti			Primi			Secundi			Tertii			Quarti	
''	'	''	'''	'	''	'''	'	''	'''	''	'''	''	'	''	'''	'	''	'''	'	''	'''	''	'''
'	0.	'	''	0.	'	''	0.	'	''	'	''	'	0.	'	''	0.	'	''	0.	'	''	'	''
1	0	8	29	0	4	13	0	2	6	0	54	31	4	22	50	2	10	57	1	5	0	27	52
2	0	16	57	0	8	27	0	4	12	1	48	32	4	31	19	2	15	10	1	7	6	28	46
3	0	25	26	0	12	40	0	6	17	2	42	33	4	39	48	2	19	24	1	9	11	29	40
4	0	33	55	0	16	54	0	8	23	3	36	34	4	48	17	2	23	37	1	11	17	30	33
5	0	42	24	0	21	7	0	10	29	4	30	35	4	56	45	2	27	50	1	13	23	31	27
6	0	50	52	0	25	21	0	12	35	5	24	36	5	5	14	2	32	4	1	15	29	32	21
7	0	59	21	0	29	34	0	14	41	6	18	37	5	13	43	2	36	17	1	17	35	33	15
8	1	7	50	0	33	47	0	16	46	7	11	38	5	22	11	2	40	31	1	19	40	34	9
9	1	16	18	0	38	1	0	18	52	8	5	39	5	30	40	2	44	44	1	21	45	35	3
10	1	24	47	0	42	14	0	20	58	8	59	40	5	39	9	2	48	57	1	23	52	35	57
11	1	33	16	0	46	28	0	23	4	9	53	41	5	47	38	2	53	11	1	25	58	36	51
12	1	41	45	0	50	41	0	25	10	10	47	42	5	56	6	2	57	24	1	28	4	37	45
13	1	50	13	0	54	55	0	27	15	11	41	43	6	4	35	3	1	38	1	30	9	38	39
14	1	58	42	0	59	8	0	29	21	12	35	44	6	13	4	3	5	51	1	32	15	39	33
15	2	7	11	1	3	22	0	31	27	13	29	45	6	21	32	3	10	5	1	34	21	40	27
16	2	15	40	1	7	35	0	33	33	14	23	46	6	30	1	3	14	18	1	36	27	41	21
17	2	24	8	1	11	48	0	35	39	15	17	47	6	38	30	3	18	32	1	38	33	42	15
18	2	32	37	1	16	2	0	37	44	16	11	48	6	46	59	3	22	45	1	40	38	43	9
19	2	41	6	1	20	15	0	39	50	17	5	49	6	55	27	3	26	59	1	42	44	44	2
20	2	49	34	1	24	29	0	41	56	17	59	50	7	3	56	3	31	12	1	44	50	44	56
21	2	58	3	1	28	42	0	44	2	18	52	51	7	12	25	3	35	25	1	46	56	45	50
22	3	6	32	1	32	56	0	46	7	19	46	52	7	20	54	3	39	39	1	49	2	46	44
23	3	15	1	1	37	9	0	48	13	20	40	53	7	29	22	3	43	52	1	51	7	47	38
24	3	23	29	1	41	22	0	50	19	21	34	54	7	37	51	3	48	6	1	53	13	48	32
25	3	31	58	1	45	36	0	52	25	22	28	55	7	46	20	3	52	19	1	55	19	49	26
26	3	40	27	1	49	49	0	54	31	23	22	56	7	54	48	3	56	32	1	57	25	50	20
27	3	48	55	1	54	3	0	56	37	24	16	57	8	3	17	4	0	46	1	59	31	51	14
28	3	57	24	1	58	16	0	58	42	25	10	58	8	11	46	4	4	59	2	1	36	52	8
29	4	5	53	2	2	30	1	0	48	26	4	59	8	20	15	4	9	13	2	3	42	53	2
30	4	14	22	2	6	43	1	2	54	26	58	60	8	28	43	4	13	26	2	5	48	53	56

TABVLA TEMPORIS MEDIO PRIMI SATELLITIS à JOVE MOTVI CONGRVENTIS.

	Sig. o.				Sig. I.			Sig. II.			Sig. III.			Sig. IV.			Sig. V.		
'' ' o.	'' ' H	''' '' '	''' ''	'' ' o.	'' ' H.	''' '' '	''' ''	H.	'	''	H.	'	''	H.	'	''	H.	'	''
0	0	0	0	30	3	32	23	7	4	46	10	37	9	14	9	32	17	41	55
1	0	7	5	31	3	39	28	7	11	51	10	44	14	14	16	37	17	49	0
2	0	14	10	32	3	46	33	7	18	56	10	51	19	14	23	42	17	56	5
3	0	21	14	33	3	53	37	7	26	0	10	58	23	14	30	46	18	3	9
4	0	28	19	34	4	0	42	7	33	5	11	5	28	14	37	51	18	10	14
5	0	35	24	35	4	7	47	7	40	10	11	12	33	14	44	56	18	17	19
6	0	42	29	36	4	14	52	7	47	15	11	19	38	14	52	1	18	24	24
7	0	49	33	37	4	21	56	7	54	19	11	26	42	14	59	5	18	31	28
8	0	56	38	38	4	29	1	8	1	24	11	33	47	15	6	10	18	38	33
9	1	3	43	39	4	36	6	8	8	29	11	40	52	15	13	15	18	45	38
10	1	10	48	40	4	43	11	8	15	34	11	47	57	15	20	20	18	52	43
11	1	17	52	41	4	50	15	8	22	38	11	55	1	15	27	24	18	59	47
12	1	24	57	42	4	57	20	8	29	43	12	2	6	15	34	29	19	6	52
13	1	32	2	43	5	4	25	8	36	48	12	9	11	15	41	34	19	13	57
14	1	39	7	44	5	11	30	8	43	53	12	16	16	15	48	39	19	21	2
15	1	46	12	45	5	18	35	8	50	58	12	23	21	15	55	44	19	28	7
16	1	53	16	46	5	25	39	8	58	2	12	30	25	16	2	48	19	35	11
17	2	0	21	47	5	32	44	9	5	7	12	37	30	16	9	53	19	42	16
18	2	7	26	48	5	39	49	9	12	12	12	44	35	16	16	58	19	49	21
19	2	14	31	49	5	46	54	9	19	17	12	51	40	16	24	3	19	56	26
20	2	21	35	50	5	53	58	9	26	21	12	58	44	16	31	7	20	3	30
21	2	28	40	51	6	1	3	9	33	26	13	5	49	16	38	12	20	10	35
22	2	35	45	52	6	8	8	9	40	31	13	12	54	16	45	17	20	17	40
23	2	42	50	53	6	15	13	9	47	36	13	19	59	16	52	22	20	24	45
24	2	49	54	54	6	22	17	9	54	40	13	27	3	16	59	26	20	31	49
25	2	56	59	55	6	29	22	10	1	45	13	34	8	17	6	31	20	38	54
26	3	4	4	56	6	36	27	10	8	50	13	41	13	17	13	36	20	45	59
27	3	11	9	57	6	43	32	10	15	55	13	48	18	17	20	41	20	53	4
28	3	18	13	58	6	50	36	10	22	59	13	55	22	17	27	45	21	0	8
29	3	25	18	59	6	57	41	10	30	4	14	2	27	17	34	50	21	7	13
30	3	32	23	60	7	4	46	10	37	9	14	9	32	17	41	55	21	14	18

TABVLA TEMPORIS MEDIIS SATELLITVM SECVNDI, TERTII ET QVARTI MOTIBVS à JOVE CONGRVENTIS.

	Secundi			Tertii			Quartì				Secundi			Tertii			Quartì		
″	″	‴		″	‴		″	‴		″	″	‴		″	‴		″	‴	
′	′	″	‴	′	″	‴	′	″	‴	′	′	″	‴	′	″	‴	′	″	‴
o.	H	′	″	H.	′	″	H.	′	″	o.	H.	′	″	H.	′	″	H.	′	″
0	0	0	0	0	0	0	0	0	0	30	7	6	30	14	19	58	33	30	25
1	0	14	13	0	28	40	1	7	1	31	7	20	43	14	48	38	34	37	26
2	0	28	26	0	57	20	2	14	2	32	7	34	56	15	17	18	35	44	27
3	0	42	39	1	26	0	3	21	3	33	7	49	9	15	45	58	36	51	28
4	0	56	52	1	54	40	4	28	3	34	8	3	22	16	14	38	37	58	28
5	1	11	5	2	23	20	5	35	4	35	8	17	35	16	43	18	39	5	29
6	1	25	18	2	52	0	6	42	5	36	8	31	48	17	11	58	40	12	30
7	1	39	31	3	20	40	7	49	6	37	8	46	1	17	40	38	41	19	31
8	1	53	44	3	49	19	8	56	7	38	9	0	14	18	9	17	42	26	32
9	2	7	57	4	17	59	10	3	8	39	9	14	27	18	37	57	43	33	33
10	2	22	10	4	46	39	11	10	8	40	9	28	40	19	6	37	44	40	33
11	2	36	23	5	15	19	12	17	9	41	9	42	53	19	35	17	45	47	34
12	2	50	36	5	43	59	13	24	10	42	9	57	6	20	3	57	46	54	35
13	3	4	49	6	12	39	14	31	11	43	10	11	19	20	32	37	48	1	36
14	3	19	2	6	41	19	15	38	12	44	10	25	31	21	1	17	49	8	37
15	3	33	15	7	9	59	16	45	13	45	10	39	44	21	29	57	50	15	38
16	3	47	28	7	38	39	17	52	13	46	10	53	57	21	58	37	51	22	38
17	4	1	41	8	7	19	18	59	14	47	11	8	10	22	27	17	52	29	39
18	4	15	54	8	35	59	20	6	15	48	11	22	23	22	55	57	53	36	40
19	4	30	7	9	4	39	21	13	16	49	11	36	36	23	24	37	54	43	41
20	4	44	20	9	33	19	22	20	17	50	11	50	49	23	53	17	55	50	42
21	4	58	33	10	1	59	23	27	18	51	12	5	2	24	21	57	56	57	43
22	5	12	46	10	30	39	24	34	18	52	12	19	15	24	50	37	58	4	43
23	5	26	59	10	59	18	25	41	19	53	12	33	28	25	19	16	59	11	44
24	5	41	12	11	27	58	26	48	20	54	12	47	41	25	47	56	60	18	45
25	5	55	25	11	56	38	27	55	21	55	13	1	54	26	16	36	61	25	46
26	6	9	38	12	25	18	29	2	22	56	13	16	7	26	45	16	62	32	47
27	6	23	51	12	53	58	30	9	23	57	13	30	20	27	13	56	63	39	48
28	6	38	4	13	22	38	31	16	23	58	13	44	33	27	42	36	64	45	48
29	6	52	17	13	51	18	32	23	24	59	13	58	46	28	11	16	65	53	49
30	7	6	30	14	19	58	33	30	25	60	14	12	59	28	39	56	67	0	50

SEMIDURATIONES ECLIPSIUM SATELLITUM JOVIS.

Jovis a Nodo Satellitum Diſtantia.

Gr.	Sig. O. VI.						Sig. I. VII.						Sig. II. VIII.						Gr.
	Sat. Primi			*Secundi*			*Primi*			*Secundi*			*Primi*			*Secundi*			
	H.	′	″	H.	′	″	H.	′	″	H.	′	″	H.	′	″	H.	′	″	
0	1	8	30	1	27	0	1	7	24	1	24	25	1	5	9	1	18	53	30
1	1	8	29	1	26	59	1	7	20	1	24	15	1	5	5	1	18	43	29
2	1	8	29	1	26	59	1	7	15	1	24	5	1	5	1	1	18	33	28
3	1	8	28	1	26	58	1	7	11	1	23	55	1	4	57	1	18	23	27
4	1	8	28	1	26	57	1	7	7	1	23	44	1	4	53	1	18	14	26
5	1	8	27	1	26	56	1	7	3	1	23	34	1	4	49	1	18	5	25
6	1	8	27	1	26	54	1	6	59	1	23	23	1	4	46	1	17	56	24
7	1	8	26	1	26	52	1	6	55	1	23	12	1	4	42	1	17	47	23
8	1	8	25	1	26	49	1	6	50	1	23	0	1	4	39	1	17	38	22
9	1	8	24	1	26	46	1	6	46	1	22	49	1	4	35	1	17	30	21
10	1	8	22	1	26	43	1	6	41	1	22	38	1	4	32	1	17	22	20
11	1	8	21	1	26	40	1	6	36	1	22	27	1	4	29	1	17	14	19
12	1	8	19	1	26	36	1	6	31	1	22	16	1	4	26	1	17	6	18
13	1	8	17	1	26	31	1	6	26	1	22	5	1	4	23	1	16	59	17
14	1	8	15	1	26	26	1	6	21	1	21	53	1	4	20	1	16	53	16
15	1	8	13	1	26	20	1	6	16	1	21	42	1	4	17	1	16	47	15
16	1	8	11	1	26	14	1	6	12	1	21	30	1	4	15	1	16	41	14
17	1	8	8	1	26	8	1	6	7	1	21	19	1	4	12	1	16	36	13
18	1	8	5	1	26	2	1	6	3	1	21	7	1	4	10	1	16	31	12
19	1	8	3	1	25	56	1	5	58	1	20	56	1	4	8	1	16	26	11
20	1	8	0	1	25	49	1	5	54	1	20	44	1	4	7	1	16	22	10
21	1	7	57	1	25	42	1	5	49	1	20	33	1	4	6	1	16	18	9
22	1	7	54	1	25	34	1	5	45	1	20	21	1	4	5	1	16	14	8
23	1	7	51	1	25	26	1	5	40	1	20	10	1	4	4	1	16	11	7
24	1	7	47	1	25	19	1	5	35	1	19	58	1	4	3	1	16	8	6
25	1	7	44	1	25	11	1	5	30	1	19	47	1	4	3	1	16	5	5
26	1	7	41	1	25	2	1	5	26	1	19	36	1	4	2	1	16	3	4
27	1	7	37	1	24	53	1	5	21	1	19	25	1	4	2	1	16	2	3
28	1	7	33	1	24	44	1	5	17	1	19	14	1	4	1	1	16	1	2
29	1	7	29	1	24	35	1	5	13	1	19	3	1	4	0	1	16	0	1
30	1	7	24	1	24	25	1	5	9	1	18	53	1	4	0	1	16	0	0
	Sig. XI. V.						Sig. X. IV.						Sig. IX. III.						

SEMIDURATIONES ECLIPSIUM SATELLITUM JOVIS.

Jovis a Nodo Satellitum Diſtantia

	Sig. O. VI.		Sig. I. VII.		Sig. II. VIII.	
Gr.	*Sat. Tertii*	*Quarti*	*Tertii*	*Quarti*	*Tertii*	*Gr.*
	H. ′ ″	H. ′ ″	H. ′ ″	H. ′ ″	H. ′ ″	
0	1 48 0	2 23 0	1 39 1	1 50 41	1 18 0	30
1	1 47 59	2 22 56	1 38 26	1 48 25	1 17 17	29
2	1 47 57	2 22 49	1 37 51	1 46 2	1 16 35	28
3	1 47 53	2 22 38	1 37 15	1 43 33	1 15 53	27
4	1 47 49	2 22 24	1 36 38	1 40 58	1 15 12	26
5	1 47 43	2 22 5	1 36 0	1 38 17	1 14 31	25
6	1 47 37	2 21 42	1 35 22	1 35 30	1 13 52	24
7	1 47 29	2 21 15	1 34 43	1 32 36	1 13 14	23
8	1 47 20	2 20 44	1 34 3	1 29 34	1 12 36	22
9	1 47 9	2 20 8	1 33 22	1 26 24	1 11 59	21
10	1 46 57	2 19 28	1 32 41	1 23 5	1 11 23	20
11	1 46 44	2 18 44	1 31 59	1 19 37	1 10 48	19
12	1 46 30	2 17 55	1 31 17	1 15 58	1 10 15	18
13	1 46 14	2 17 2	1 30 35	1 12 8	1 9 44	17
14	1 45 58	2 16 5	1 29 52	1 8 4	1 9 14	16
15	1 45 40	2 15 4	1 29 8	1 3 43	1 8 45	15
16	1 45 22	2 13 58	1 28 24	0 59 4	1 8 18	14
17	1 45 2	2 12 48	1 27 40	0 54 0	1 7 52	13
18	1 44 41	2 11 34	1 26 55	0 48 26	1 7 28	12
19	1 44 18	2 10 15	1 26 10	0 42 12	1 7 5	11
20	1 43 55	2 8 52	1 25 25	0 34 53	1 6 44	10
21	1 43 30	2 7 25	1 24 40	0 25 36	1 6 25	9
22	1 43 4	2 5 53	1 23 56	0 9 47	1 6 8	8
23	1 42 37	2 4 16	1 23 11	0 0 0	1 5 53	7
24	1 42 9	2 2 34	1 22 26		1 5 40	6
25	1 41 40	2 0 48	1 21 41		1 5 28	5
26	1 41 10	1 58 56	1 20 56		1 5 18	4
27	1 40 39	1 57 0	1 20 12		1 5 10	3
28	1 40 8	1 54 59	1 19 28		1 5 5	2
29	1 39 35	1 52 52	1 18 44		1 5 2	1
30	1 39 1	1 50 41	1 18 0		1 5 0	0
	Sig. XI. V.		Sig. X. IV.		Sig. IX. III.	

ÆQVATIONES LVMINIS ADDENDÆ.

Solis à Loco Jovis Heliocentrico Diſtantia.

Gr.	Sig. 0.		I.		II.		III.		IV.		V.		Gr.
	′	″	′	″	′	″	′	″	′	″	′	″	
0	0	0	13	12	10	59	7	41	4	5	1	8	30
1	14	0	13	9	10	53	7	34	3	58	1	4	29
2	13	59	13	6	10	47	7	27	3	51	1	0	28
3	13	59	13	3	10	41	7	20	3	44	0	56	27
4	13	59	13	0	10	35	7	13	3	37	0	52	26
5	13	58	12	56	10	29	7	5	3	31	0	48	25
6	13	58	12	52	10	23	6	58	3	24	0	44	24
7	13	57	12	48	10	17	6	51	3	17	0	40	23
8	13	56	12	44	10	11	6	44	3	10	0	37	22
9	13	55	12	40	10	4	6	36	3	3	0	34	21
10	13	54	12	36	9	57	6	28	2	57	0	31	20
11	13	53	12	32	9	51	6	20	2	50	0	28	19
12	13	52	12	28	9	45	6	13	2	44	0	25	18
13	13	51	12	24	9	39	6	6	2	38	0	22	17
14	13	50	12	20	9	32	5	59	2	32	0	19	16
15	13	48	12	15	9	25	5	52	2	26	0	17	15
16	13	46	12	11	9	19	5	44	2	20	0	15	14
17	13	44	12	6	9	13	5	37	2	14	0	13	13
18	13	42	12	1	9	6	5	30	2	8	0	11	12
19	13	40	11	56	8	59	5	23	2	3	0	9	11
20	13	38	11	51	8	52	5	16	1	58	0	7	10
21	13	37	11	46	8	45	5	8	1	52	0	6	9
22	13	35	11	41	8	38	5	1	1	47	0	5	8
23	13	33	11	36	8	31	4	54	1	42	0	4	7
24	13	30	11	31	8	24	4	47	1	37	0	3	6
25	13	27	11	26	8	17	4	40	1	32	0	2	5
26	13	24	11	21	8	10	4	33	1	27	0	2	4
27	13	21	11	16	8	3	4	26	1	22	0	1	3
28	13	18	11	11	7	56	4	19	1	17	0	1	2
29	13	15	11	5	7	49	4	12	1	12	0	0	1
30	13	22	10	59	7	41	4	5	1	8	0	0	0
	Sig. XI.		X.		IX.		VIII.		VII.		VI.		

ÆQVATIONVM LVMINIS CORRECTIONES.

Locus Jovis Heliocentricus.		*Correctiones Addendæ.*		*Locus Jovis Heliocentricus.*	
s	°	′	″	*s*	°
0	10	0	0	0	10
0	20	0	2	0	0
1	0	0	6	11	20
1	10	0	13	11	10
1	20	0	23	11	0
2	0	0	35	10	20
2	10	0	49	10	10
2	20	1	5	10	0
3	0	1	22	9	20
3	10	1	40	9	10
3	20	1	58	9	0
4	0	2	17	8	20
4	10	2	34	8	10
4	20	2	50	8	0
5	0	3	4	7	20
5	10	3	15	7	10
5	20	3	24	7	0
6	0	3	29	6	20
6	10	3	30	6	10

Quoniam Experimento conſtat ſerius accidere Satellitum Eclipſes, quo major eſt Jovis *diſtantia a* Terrâ, *ac proinde Lucem non niſi motu progreſſivo propogari; itaq; Tabellam hanc* Correctionis Æquationum Luminis *adjecimus, è qua augmenta earum ab Eccentricitate Planetæ orta capienda ſunt.*

Diſtantiæ apparentes Satellitum a Centro Jovis in Semidiametris Jovis & Semidiametri Centeſimis.

Satellitum a Loco Jovis Geocentrico Diſtantiæ.

Gr.	Sig. O. Or. VI. Occ.				Sig. I. Or. VII. Occ.				Sig. II. Or. VIII. Occ.				Gr
	Diſtantia Satellitis.				*Diſtantia Satellitis.*				*Diſtantia Satellitis.*				
	I.	II.	III.	IV.	I.	II.	III.	IV.	I.	II.	III.	IV.	
	Semid.	*Semid.*	*Semid.*	*Semid.*	*Semid.*	*Semid.*	*Semid.*	*Semid.*	*Semid.*	*Semid.*	*Semid.*	*Semid.*	
0	0, 0	0, 0	0, 0	0, 0	2,95	4,70	7,50	13,19	5,12	8,14	12 99	22,85	30
1	0,10	0,16	0,26	0,46	3,04	4,84	7,73	13,59	5,17	8,22	13,12	23,07	29
2	0,21	0,33	0,52	0,92	3,13	4,98	7,95	13,98	5,22	8,30	13,24	23,29	28
3	0,31	0,49	0,78	1,38	3,22	5,12	8,17	14,37	5,27	8,38	13,36	23,51	27
4	0,41	0,66	1,05	1,84	3,30	5,26	8,39	14,75	5,31	8,45	13,48	23,71	26
5	0,51	0,82	1,31	2,30	3,39	5,39	8,60	15,13	5,36	8,52	13,59	23,91	25
6	0,62	0,98	1,57	2,76	3,47	5,53	8,82	15,51	5,40	8,59	13,70	24,10	24
7	0,72	1,14	1,83	3,22	3,56	5,66	9,03	15,88	5,44	8,66	13,81	24,28	23
8	0,82	1,31	2,09	3,67	3,64	5,79	9,24	16,24	5,48	8,72	13,91	24,46	22
9	0,92	1,47	2,34	4,13	3,72	5,92	9,44	16,60	5,52	8,78	14,00	24,63	21
10	1,03	1,63	2,60	4,58	3,80	6,04	9,64	16,96	5,55	8,84	14,10	24,79	20
11	1,13	1,79	2,86	5,03	3,87	6,17	9,84	17,31	5,59	8,89	14,18	24,95	19
12	1,23	1,95	3,11	5,48	3,95	6,29	10,04	17,65	5,62	8,94	14,27	25,09	18
13	1,33	2,12	3,37	5,93	4,03	6,41	10,23	17,99	5,65	8,99	14,34	25,23	17
14	1,43	2,27	3,63	6,38	4,10	6,53	10,42	18,32	5,68	9,04	14,42	25,36	16
15	1,53	2,43	3,88	6,83	4,18	6,65	10,61	18,65	5,71	9,08	14,49	25,48	15
16	1,63	2,59	4,13	7,27	4,25	6,76	10,79	18,98	5,73	9,12	14,56	25,60	14
17	1,73	2,75	4,38	7,71	4,32	6,88	10,98	19,30	5,76	9,16	14,62	25,71	13
18	1,83	2,91	4,63	8,15	4,39	6,99	11,15	19,61	5,78	9,20	14,67	25,81	12
19	1,92	3,06	4,88	8,59	4,46	7,09	11,32	19,91	5,80	9,23	14,72	25,90	11
20	2,02	3,22	5,13	9,02	4,53	7,20	11,49	20,21	5,82	9,26	14,77	25,98	10
21	2,12	3,37	5,37	9,45	4,59	7,31	11,66	20,50	5,83	9,29	14,81	26,06	9
22	2,22	3,52	5,62	9,88	4,66	7,41	11,82	20,79	5,85	9,31	14,85	26,13	8
23	2,31	3,67	5,86	10,31	4,72	7,51	11,98	21,07	5,87	9,33	14,89	26,19	7
24	2,40	3,82	5,11	10,73	4,78	7,61	12,14	21,34	5,88	9,35	14,92	26,24	6
25	2,50	3,97	6,34	11,15	4,84	7,70	12,29	21,61	5,89	9,37	14,94	26,28	5
26	2,59	4,12	6,57	11,57	4,90	7,80	12,44	21,87	5,89	9,38	14,96	26,32	4
27	2,68	4,27	6,81	11,98	4,96	7,89	12,58	22,13	5,90	9,39	14,98	26,35	3
28	2,77	4,41	7,04	12,39	5,01	7,97	12,72	22,37	5,91	9,40	14,99	26,37	2
29	2,86	4,56	7,27	12,79	5,07	8,06	12,86	22,61	5,91	9,40	15,00	26,38	1
30	2,95	4,70	7,50	13,19	5,12	8,14	12,99	22,85	5,91	9,40	15,00	26,38	0
	Sig. XI. Occ. V. Or.				Sig. X. Occ. IV. Or.				Sig. IX. Occ. III. Or.				

TABVLA LATITVDINARIA SATELLITVM JOVIS.

Argument. Latitudinis.	Sig. 0. *Bor.* 6. *Auſt.*		*Reduct. Subtr.*	Sig. 1. *Bor.* 7. *Auſt.*		*Reduct. Subtr.*	Sig. 2. *Bor.* 8. *Auſt.*		*Reduct. Subtr.*	
	Inclinatio.			*Inclinatio.*			*Inclinatio.*			
	Satellitum I. II. III.	Satellitis IV.		Satellitum I. II. III.	Satellitis IV.		Satellitum I. II. III.	Satellitis IV.		
Gr.	° ′ ″	° ′ ″	′ ″	° ′ ″	° ′ ″	′ ″	° ′ ″	° ′ ″	′ ″	
0	0 0 0	0 0 0	0 0	1 27 28	1 20 58	1 44	2 31 32	2 20 16	1 44	30
1	0 3 3	0 2 50	0 4	1 30 6	1 23 24	1 46	2 33 2	2 21 40	1 42	29
2	0 6 6	0 5 39	0 8	1 32 42	1 25 49	1 48	2 34 30	2 23 1	1 40	28
3	0 9 9	0 8 28	0 13	1 35 17	1 28 12	1 50	2 35 54	2 24 20	1 38	27
4	0 12 12	0 11 18	0 17	1 37 50	1 30 34	1 51	2 37 16	2 25 36	1 35	26
5	0 15 14	0 14 7	0 21	1 40 21	1 32 54	1 53	2 38 35	2 26 49	1 32	25
6	0 18 17	0 16 56	0 25	1 42 50	1 35 12	1 54	2 39 51	2 27 59	1 29	24
7	0 21 19	0 19 44	0 29	1 45 17	1 37 28	1 56	2 41 4	2 29 7	1 26	23
8	0 24 21	0 22 32	0 33	1 47 42	1 39 43	1 57	2 42 15	2 30 12	1 23	22
9	0 27 22	0 25 20	0 37	1 50 6	1 41 55	1 58	2 43 22	2 31 14	1 20	21
10	0 30 22	0 28 7	0 41	1 52 28	1 44 6	1 59	2 44 26	2 32 13	1 17	20
11	0 33 23	0 30 54	0 45	1 54 47	1 46 16	1 59	2 45 27	2 33 10	1 14	19
12	0 36 22	0 33 40	0 49	1 57 4	1 48 23	2 0	2 46 25	2 34 4	1 11	18
13	0 39 21	0 36 26	0 53	1 59 19	1 50 28	2 0	2 47 20	2 34 55	1 8	17
14	0 42 19	0 39 11	0 56	2 1 32	1 52 31	2 0	2 48 13	2 35 43	1 4	16
15	0 45 16	0 41 55	1 0	2 3 43	1 54 32	2 0	2 49 2	2 36 28	1 0	15
16	0 48 13	0 44 38	1 4	2 5 51	1 56 31	2 0	2 49 47	2 37 10	0 56	14
17	0 51 9	0 47 21	1 8	2 7 57	1 58 27	2 0	2 50 30	2 37 50	0 53	13
18	0 54 3	0 50 3	1 11	2 10 1	2 0 22	2 0	2 51 10	2 38 27	0 49	12
19	0 56 57	0 52 44	1 14	2 12 3	2 2 15	1 59	2 51 47	2 39 1	0 45	11
20	0 59 50	0 55 23	1 17	2 14 2	2 4 5	1 59	2 52 20	2 39 32	0 41	10
21	1 2 41	0 58 2	1 20	2 15 58	2 5 53	1 58	2 52 50	2 40 0	0 37	9
22	1 5 32	1 0 40	1 23	2 17 52	2 7 38	1 57	2 53 17	2 40 25	0 33	8
23	1 8 21	1 3 17	1 26	2 19 44	2 9 21	1 56	2 53 41	2 40 47	0 29	7
24	1 11 9	1 5 52	1 29	2 21 33	2 11 2	1 54	2 54 2	2 41 6	0 25	6
25	1 13 56	1 8 27	1 32	2 23 20	2 12 41	1 53	2 54 20	2 41 23	0 21	5
26	1 16 41	1 11 0	1 35	2 25 4	2 14 17	1 51	2 54 34	2 41 36	0 17	4
27	1 19 25	1 13 31	1 38	2 26 45	2 15 51	1 50	2 54 45	2 41 46	0 13	3
28	1 22 8	1 16 2	1 40	2 28 23	2 17 22	1 48	2 54 54	2 41 54	0 8	2
29	1 24 49	1 18 31	1 42	2 29 59	2 18 50	1 46	2 54 58	2 41 58	0 4	1
30	1 27 28	1 20 58	1 44	2 31 32	2 20 16	1 44	2 55 0	2 42 0	0 0	0
	Sig. 11. *Auſt.* 5. *Bor.*		*Adde.*	Sig. 10. *Auſt.* 4. *Bor.*		*Adde.*	Sig. 9. *Auſt.* 3. *Bor.*		*Adde.*	*Gr.*

Viri Reverendi D. Jacobi Bradley, *in has ſuas* Satellitum *Tabulas Notæ.*

IN his Tabulis medios *Satellitum* motus limitavimus, factâ collatione plurium Obſervationum, quæ haberi poterant antiquiorum, quæq; præ cæteris accuratæ viſæ ſunt, cum nuperis noſtris apud *Wanſted* captis; *Jove* nempe poſt quatuor Revolutiones in eodem fere Orbis ſui loco exiſtente. Conferendo autem pari modo obſervata, poſt unam, duas vel tres *Jovis* periodos, invenimus aliquando differentias ſat notabiles in motibus *Satellitum* trium Interiorum, maxime vero in *Secundo* ſive *Penintimo*.

Utrum hæ inæqualitates aliqua ex parte oriantur ab *Eccentricitate* Orbium *Satellitum* ac motu *Apſidum*, nondum ſatis conſtat; verum juxta ea quæ in motu *Secundi* annotavimus, probabile eſt eas mutuis *Satellitum* in ſe invicem actionibus tribui poſſe. *Secundus* enim interdum tam brevi temporis ſpatio tantum ab æquabili motu deviat, ut a parvâ *Eccentricitate* effici non poſſit, dum obſervationes aliæ eam non patiuntur magnam. Quantum hactenus colligere datum eſt, periodus horum errorum proxime reſpondet tempori, quo tres *Satellites* Interiores ad eundem ſitum inter ſe & cum Axe Umbræ *Jovis* revolvuntur, id quod fit ſingulis 437 Diebus, poſt 123 *Secundi* periodos. Elapſo hoc ſpatio iidem proxime errores eodem fere ordine reperiuntur ac prius: Intermedio autem tempore, ſc. poſt 60 ejus periodos, deviabit *Secundus* 10′, 20′, 30′, imo interdum 40 temporis minuta, a tenore motûs ante vel poſt ſeptem menſes ſervato. Quoniam vero *Satellites* poſt dictam periodum, eundem in Cælo ſitum non obtinent, fieri poteſt ut hi errores paulo diverſi proveniant. Quod ſi adhuc Eccentricus fuerit hujus *Satellitis* Orbis, ut nuperæ ſuadent obſervationes, compoſitæ utriuſq; inæqualitatis cauſæ motum ejus valde intricatum reddent, nec facile una ab alterâ Obſervatione ſolâ diſtinguetur.

Errores *Primi* ac *Tertii* non ſunt adeo magni, ſed ab iiſdem cauſis, ut videtur, orti; utpote qui ab Eccentricitate ſolâ minime pendent. Senſibilem etiam notavimus differentiam inter Durationes Eclipſium *Primi* apud diverſos *Nodos* factarum, eaſq; alternatim majores & minores eſſe: Majores ſcilicet in *Leone* ad *Nodum* Deſcendentem, ac Annis $168\frac{2}{3}$, $169\frac{4}{5}$ ac 1718, ſaltem $2^{h.}$ 20′ durantes; quæ tamen ad *Nodum* alterum in *Aquario*, Annis 1677 & 1689, $2^{h.}$ 14′ non excedebant; uti conferendo plures Obſervationes Immerſionum & Emerſionum, quantum fieri potuit inter ſe propinquarum, liquido conſtabat. Manifeſtum autem eſt hanc diſcrepantiam ab Eccentrici-

tate

tate Orbis *Satellitis*, ſi qua ſit, non totam oriri. Cui vero cauſæ tribuenda ſit nondum perſpicimus. Dum autem futuris invigilamus Obſervationibus, quarum ope res à poſteriori aperiri poterit, liceat ſperare aliquos e Geometris magni *Newtoni* æmulis, ſtabili & probato *Gravitatis Principio* innixos, inveſtigandis à priori mutuis his *Satellitum* effectibus, eximiam operam collocaturos.

Ex iis quas habemus *Quarti* Obſervationes, conſtat Orbem ejus *Ellipticum* eſſe: Et omnia noſtra nupera obſervata probe repræſentantur, ponendo maximam ejus Æquationem æqualem illi Planetæ *Veneris*, ſive 48 Min. ſummamq; ejus *Apſidem* occupaſſe ♓ 8°. 00′, ineunte Anno 1717. Conferendo autem hanc Hypotheſin cum Obſervationibus prioribus, Annis 1671, 1676, & 1677 factis, calculus multum a Cœlo diſcrepare inventus eſt. Reductâ vero *Apſide* in ♒ 14°. 00′, ineunte Anno 1677, ſublata eſt fere omnis iſta diſcrepantia. Poſito itaq; *Apſidem*, motu æquabili ſex graduum in decennio, in conſequentia ferri, cum intermediis etiam Obſervationibus Hypotheſis illa probe congruere deprehenſa eſt, quamq; proinde in Tabulis amplexi ſumus. Hunc autem computum ubiq; Cœlo conformem (ſi duo tantum obſervata excipias, eaq; merito ſuſpecta) intra ſextam gradus partem experimur.

Tabula noſtra *Æquationum Luminis* ſupponit radios Lucis motu æquabili per Diametrum Orbis *Terræ* in 14 Temporis Minutis propagari, & omnino varianti *Jovis* a *Terrâ* diſtantiæ reſpondet, cum *Jupiter Soli* proximus eſt. Cum autem in *Aphelio* ejus augetur diſtantia Planetæ quartâ parte diametri Orbis *Terræ*, neceſſe habuimus has Æquationes adjectâ Tabellâ corrigere.

Quod Latitudines attinet, e nuperis Obſervationibus conſtat Nodos *Quarti* ad grad. $11\frac{1}{2}$ *Aquarii* & *Leonis* hodie reperiri; Nodoſq; *Tertii* his proximos eſſe: Quocirca etiam eos *Satellitum* Interiorum ibidem collocamus, id non prohibentibus hactenus a nobis Obſervatis. Quod ſi Nodi *Satellitum* ante 40 Annos, grad. 15^{um} *Aquarii* & *Leonis* occupabant, ut vult D. *Caſſinus*, cujus authoritate non alia gravior eſt, tum in qualibet *Jovis* periodo duodecennali unum circiter gradum retroceſſiſſe videntur. Inclinationem ad Planum Orbis *Jovis* à D. *Caſſino* poſitam, *i. e.* 2°. 55′, retinemus in cæteris; *Quarti* vero Orbitam paulo minus inclinari, nempe 2°. 42′, ſtatuimus. Verum circellorum adeo minimorum ſitum accurate definire plane arduum eſt, neque abſq; *Teleſcopiis* perfectiſſimis ſuſcipiendum.

Coronidis loco placuit Reverendo D. Pound *Tabulas ſequentes prioribus æquipollentes de proprio ſubjungere, pro Calculo Eclipſium* Primi *Satellitis ſolâ Additione abſolvendo, ad exemplum Tabularum elaboratiſſimarum D.* Caſſini *factas, ſed & compendio adhuc multo majori expeditas.*

EPOCHÆ CONJUNCTIONUM PRIMI SATELLITIS CUM JOVE.

Annis Julianis Current.	Conjunct.				Num. A.	Num. B.	Annis Julianis Current.	Conjunct.				Num. A.	Num. B.
	D.	H.	′	″				D.	H.	′	″		
1719	1	6	11	13	872	395	1749	0	11	9	34	400	865
1720	0	20	22	40	956	309	1750	0	1	21	1	485	779
21	1	5	2	44	40	228	51	1	10	1	5	569	697
22	0	19	14	11	125	142	52	1	0	12	33	653	611
23	0	9	25	38	209	56	53	1	8	52	37	738	530
1724	1	18	5	42	293	970	1754	0	23	4	4	822	444
1725	0	8	17	10	377	888	1755	0	13	15	32	906	358
26	1	16	57	13	462	807	56	0	3	27	0	990	272
27	1	7	8	41	546	721	57	0	12	7	3	75	190
28	0	21	20	8	630	635	58	0	2	18	30	159	109
1729	1	6	0	12	715	553	1759	1	10	58	34	243	23
1730	0	20	11	39	799	467	1760	1	1	10	1	328	937
31	0	10	23	7	883	381	61	1	9	50	5	412	855
32	0	0	34	34	967	295	62	1	0	1	32	496	769
33	0	9	14	38	52	214	63	0	14	13	0	580	683
1734	1	17	54	41	136	132	1764	0	4	24	27	665	597
1735	1	8	6	9	220	46	1765	0	13	4	31	749	516
36	0	22	17	36	305	960	66	0	3	15	58	833	430
37	1	6	57	40	389	879	67	1	11	56	2	918	348
38	0	21	9	7	473	793	68	1	2	7	29	2	262
1739	0	11	20	35	557	707	1769	1	10	47	33	86	181
1740	0	1	32	2	642	621	1770	1	0	59	0	171	95
41	0	10	12	6	726	539	71	0	15	10	28	255	9
42	0	0	23	33	810	453	72	0	5	21	56	339	923
43	1	9	3	37	895	372	73	0	14	2	0	423	841
1744	0	23	15	4	979	286	1774	0	4	13	27	508	760
1745	1	7	55	8	63	204	1775	1	12	53	31	592	674
46	0	22	6	35	148	118	76	1	3	4	58	676	588
47	0	12	18	3	232	32	77	1	11	45	1	761	506
48	0	2	29	30	316	946	78	1	1	56	28	845	420
1749	0	11	9	34	400	865	1779	0	16	7	56	929	334

REVOLVTIONES PRIMI SATELLITIS JOVIS IN MENSIBVS.

JANUARII.

D.	H.	′	″	A.	B.
1	18	28	36	0	5
3	12	57	12	1	9
5	7	25	48	1	14
7	1	54	24	2	18
8	20	23	0	2	23
10	14	51	36	2	27
12	9	20	12	3	32
14	3	48	48	3	37
15	22	17	24	4	41
17	16	46	0	4	46
19	11	14	36	4	51
21	5	43	12	5	55
23	0	11	47	5	60
24	18	40	23	6	64
26	13	8	59	6	69
28	7	37	35	7	73
30	2	6	11	7	78
31	20	34	47	7	82

FEBRUARII.

2	15	3	23	8	87
4	9	31	59	8	92
6	4	0	35	9	96
7	22	29	11	9	101
9	16	57	47	9	105
11	11	26	23	10	110
13	5	54	59	10	114
15	0	23	35	11	118
16	18	52	11	11	123
18	13	20	47	11	128
20	7	49	23	12	132
22	2	17	59	12	137
23	20	46	35	13	141
25	15	15	11	13	146
27	9	43	47	13	150

MARTII.

D.	H.	′	″	A.	B.
1	4	12	23	14	155
2	22	40	59	14	159
4	17	9	35	15	164
6	11	38	10	15	168
8	6	6	46	16	173
10	0	35	22	16	177
11	19	3	58	16	182
13	13	32	34	17	186
15	8	1	10	17	190
17	2	29	46	18	195
18	20	58	22	18	199
20	15	26	58	18	204
22	9	55	34	19	208
24	4	24	10	19	213
25	22	52	46	20	217
27	17	21	22	20	221
29	11	49	58	20	225
31	6	18	34	21	230

APRILIS.

2	0	47	10	21	235
3	19	15	46	22	239
5	13	44	22	22	244
7	8	12	58	22	248
9	2	41	34	23	252
10	21	10	10	23	257
12	15	38	46	24	261
14	10	7	22	24	265
16	4	35	58	25	270
17	23	4	33	25	274
19	17	33	9	25	279
21	12	1	45	26	283
23	6	30	21	26	287
25	0	58	57	27	292
26	19	27	33	27	296
28	13	56	9	27	300
30	8	24	45	28	304

MAII.

D.	H.	′	″	A.	B.
0	8	24	45	28	304
2	2	53	21	28	309
3	21	21	57	29	313
5	15	50	33	29	317
7	10	19	9	29	322
9	4	47	45	30	326
10	23	16	21	30	330
12	17	44	57	31	335
14	12	13	33	31	339
16	6	42	9	31	343
18	1	10	45	32	348
19	19	39	21	32	352
21	14	7	57	33	356
23	8	36	33	33	361
25	3	5	9	33	365
26	21	33	45	34	369
28	16	2	21	34	373
30	10	30	57	35	378

JUNII.

1	4	59	32	35	382
2	23	28	8	36	386
4	17	56	44	36	391
6	12	25	20	36	395
8	6	53	56	37	399
10	1	22	32	37	403
11	19	51	8	38	408
13	14	19	44	38	412
15	8	48	20	38	416
17	3	16	56	39	420
18	21	45	32	39	425
20	16	14	8	40	429
22	10	42	44	40	433
24	5	11	20	40	438
25	23	39	56	41	442
27	18	8	32	41	446
29	12	37	8	42	450

REVOLVTIONES PRIMI SATELLITIS JOVIS IN MENSIBVS.

JULII.

D.	H.	'	"	A.	B.
1	7	5	44	42	455
3	1	34	20	42	459
4	20	2	56	43	463
6	14	31	32	43	468
8	9	0	8	44	472
10	3	28	44	44	476
11	21	57	20	45	480
13	16	25	55	45	485
15	10	54	31	45	489
17	5	23	7	46	493
18	23	51	43	46	498
20	18	20	19	47	502
22	12	48	55	47	506
24	7	17	31	47	510
26	1	46	7	48	515
27	20	14	43	48	519
29	14	43	19	49	523
31	9	11	55	49	528

AUGUSTI.

2	3	40	31	49	532
3	22	9	7	50	536
5	16	37	43	50	541
7	11	6	19	51	545
9	5	34	55	51	549
11	0	3	31	51	554
12	18	32	7	52	558
14	13	0	43	52	562
16	7	29	19	53	567
18	1	57	55	53	571
19	20	26	31	54	575
21	14	55	7	54	580
23	9	23	43	54	584
25	3	52	18	55	588
26	22	20	54	55	593
28	16	49	30	56	597
30	11	18	6	56	602

SEPTEMBRIS.

D.	H.	'	"	A.	B.
1	5	46	42	56	606
3	0	15	18	57	610
4	18	43	54	57	615
6	13	12	30	58	619
8	7	41	6	58	624
10	2	9	42	58	628
11	20	38	18	59	632
13	15	6	54	59	637
15	9	35	30	60	641
17	4	4	6	60	646
18	22	32	42	60	650
20	17	1	18	61	655
22	11	29	54	61	659
24	5	58	30	62	663
26	0	27	6	62	668
27	18	55	42	62	672
29	13	24	18	63	677

OCTOBRIS.

1	7	52	54	63	681
3	2	21	30	64	686
4	20	50	6	64	690
6	15	18	41	65	695
8	9	47	17	65	699
10	4	15	53	65	704
11	22	44	29	66	708
13	17	13	5	66	713
15	11	41	41	67	717
17	6	10	17	67	721
19	0	38	53	67	726
20	19	7	29	68	730
22	13	36	5	68	735
24	8	4	41	69	739
26	2	33	17	69	744
27	21	1	53	69	749
29	15	30	29	70	753

NOVEMBRIS.

D.	H.	'	"	A.	B.
0	9	59	5	70	758
2	4	27	41	71	762
3	22	56	17	71	767
5	17	24	53	71	772
7	11	53	29	72	776
9	6	22	5	72	781
11	0	50	41	73	785
12	19	19	17	73	790
14	13	47	53	74	794
16	8	16	29	74	799
18	2	45	5	74	804
19	21	13	40	75	808
21	15	42	16	75	813
23	10	10	52	76	817
25	4	39	28	76	822
26	23	8	4	76	827
28	17	36	40	77	831
30	12	5	16	77	836

DECEMBRIS.

2	6	33	52	78	840
4	1	2	28	78	845
5	19	31	4	78	849
7	13	59	40	79	854
9	8	28	16	79	859
11	2	56	52	80	863
12	21	25	28	80	868
14	15	54	4	80	873
16	10	22	40	81	877
18	4	51	16	81	882
19	23	19	52	82	886
21	17	48	28	82	891
23	12	17	4	82	896
25	6	45	40	83	900
27	1	14	16	83	905
28	19	42	52	84	909
30	14	11	28	84	914

PRIMÆ ÆQVATIONES CONJVNCTIONVM PRIMI SATELLITIS CVM JOVE.

Num. A.	Æquat. Conjunct. Adde.		Æq. Num. B.	Num. A.	Æquat. Conjunct. Adde.		Æq. Num. B.	Num. A.	Æquat. Conjunct. Adde.		Æq. Num. B.	Num. A.	Æquat. Conjunct. Adde.		Æq. Num. B.
	′	″			′	″			′	″			′	″	
0	39	8	15	128	12	7	26	256	0	1	31	384	11	52	26
4	38	12	16	132	11	27	26	260	0	0	31	388	12	37	26
8	37	16	16	136	10	47	26	264	0	1	31	392	13	23	25
12	36	21	16	140	10	9	27	268	0	3	31	396	14	11	25
16	35	26	17	144	9	31	27	272	0	7	31	400	14	59	25
20	34	30	17	148	8	45	27	276	0	12	31	404	15	48	24
24	33	35	17	152	8	19	27	280	0	19	31	408	16	38	24
28	32	40	18	156	7	44	28	284	0	28	30	412	17	30	24
32	31	45	18	160	7	10	28	288	0	38	30	416	18	22	23
36	30	50	19	164	6	38	28	292	0	50	30	420	19	15	23
40	29	56	19	168	6	7	28	296	1	3	30	424	20	9	23
44	29	3	19	172	5	37	28	300	1	17	30	428	21	4	22
48	28	10	20	176	5	8	29	304	1	33	30	432	21	59	22
52	27	16	20	180	4	41	29	308	1	50	30	436	22	55	22
56	26	23	20	184	4	15	29	312	2	8	30	440	23	53	21
60	25	30	21	188	3	49	29	316	2	28	30	444	24	51	21
64	24	38	21	192	3	24	29	320	2	51	30	448	25	49	21
68	23	47	21	196	3	1	29	324	3	15	29	452	26	48	20
72	22	56	22	200	2	40	30	328	3	40	29	456	27	48	20
76	22	5	22	204	2	20	30	332	4	6	29	460	28	48	19
80	21	15	22	208	2	1	30	336	4	34	29	464	29	49	19
84	20	26	23	212	1	42	30	340	5	3	29	468	30	50	19
88	19	37	23	216	1	25	30	344	5	34	29	472	31	51	18
92	18	48	23	220	1	10	30	348	6	5	28	476	32	53	18
96	18	0	24	224	0	58	30	352	6	38	28	480	33	55	17
100	17	14	24	228	0	47	30	356	7	13	28	484	34	57	17
104	16	28	24	232	0	36	30	360	7	50	28	488	35	59	17
108	15	42	24	236	0	26	30	364	8	27	27	492	37	1	16
112	14	57	25	240	0	18	30	368	9	6	27	496	38	5	16
116	14	13	25	244	0	12	31	372	9	46	27	500	39	8	15
120	13	30	25	248	0	7	31	376	10	27	27	504	40	11	15
124	12	48	26	252	0	4	31	380	11	9	26	508	41	15	14
128	12	7	26	256	0	1	31	384	11	52	26	512	42	17	14

PRIMÆ ÆQUATIONES CONJUNCTIONUM PRIMI SATELLITIS CUM JOVE.

Num. A.	Æquat. Conjunct. Adde.	Æq. Num. B.	Num. A.	Æquat. Conjunct. Adde.	Æq. Num. B.	Num. A.	Æquat. Conjunct. Adde.	Æq. Num. B.	Num. A.	Æquat. Conjunct. Adde.	Æq. Num. B.
	′ ″			′ ″			′ ″			′ ″	
512	42 17	14	640	70 26	3	768	77 40	0	896	61 48	6
516	43 19	14	644	71 3	3	772	77 29	0	900	61 2	7
520	44 21	13	648	71 38	3	776	77 18	0	904	60 15	7
524	45 23	13	652	72 11	2	780	77 6	0	908	59 28	7
528	46 25	13	656	72 42	2	784	76 51	1	912	58 39	8
532	47 26	12	660	73 13	2	788	76 34	1	916	57 50	8
536	48 27	12	664	73 42	2	792	76 15	1	920	57 1	8
540	49 28	11	668	74 10	2	796	75 56	1	924	56 11	9
544	50 28	11	672	74 36	1	800	75 36	1	928	55 20	9
548	51 28	11	676	75 1	1	804	75 15	1	932	54 29	9
552	52 27	10	680	75 25	1	808	74 52	1	936	53 38	10
556	53 25	10	684	75 48	1	812	74 27	1	940	52 46	10
560	54 23	9	688	76 8	1	816	74 1	2	944	51 53	10
564	55 21	9	692	76 26	1	820	73 35	2	948	51 0	11
568	56 17	9	696	76 43	0	824	73 8	2	952	50 6	11
572	57 12	8	700	76 59	0	828	72 39	2	956	49 13	11
576	58 7	8	704	77 13	0	832	72 9	2	960	48 20	12
580	59 1	8	708	77 26	0	836	71 38	3	964	47 26	12
584	59 54	7	712	77 38	0	840	71 6	3	968	46 31	12
588	60 46	7	716	77 48	0	844	70 32	3	972	45 36	13
592	61 38	6	720	77 57	0	848	69 57	3	976	44 41	13
596	62 28	6	724	78 4	0	852	69 21	3	980	43 46	13
600	63 17	6	728	78 9	0	856	68 45	4	984	42 50	14
604	64 5	5	732	78 13	0	860	68 7	4	988	41 55	14
608	64 53	5	736	78 15	0	864	67 29	4	992	41 0	14
612	65 39	5	740	78 16	0	868	66 49	4	996	40 4	15
616	66 24	5	744	78 15	0	872	66 9	5	1000	39 8	15
620	67 7	4	748	78 12	0	876	65 28	5	1004	38 12	16
624	67 49	4	752	78 9	0	880	64 46	5	1008	37 16	16
628	68 30	4	756	78 4	0	884	64 3	5	1012	36 21	16
632	69 10	4	760	77 58	0	888	63 19	6	1016	35 26	17
636	69 49	3	764	77 50	0	892	62 34	[illegible]	1020	34 30	17
640	70 26	3	768	77 40	0	896	61 48	6	1024	33 35	17

SECVNDÆ ÆQVATIONES CONJVNCTIONVM PRIMI SATELLITIS CVM JOVE.

Num. B Æqu.	0		100		200		300		400		500		600		700		800		900	
	Æquat.		Æquat.		Æqu.		Æqu.		Æqu.		Æqu.		Æqu.		Æqu.		Æquat.		Æquat.	
	′	″	′	″	′	″	′	″	′	″	′	″	′	″	′	″	′	″	′	″
0	14	0	12	52	9	45	5	30	1	37	0	0	1	37	5	30	9	45	12	52
4	14	0	12	46	9	36	5	20	1	30	0	0	1	44	5	40	9	54	12	58
8	13	59	12	40	9	26	5	9	1	23	0	1	1	52	5	51	10	3	13	2
12	13	59	12	35	9	17	4	59	1	16	0	2	1	59	6	1	10	12	13	7
16	13	58	12	29	9	7	4	48	1	9	0	3	2	7	6	11	10	21	13	11
20	13	57	12	23	8	58	4	38	1	3	0	4	2	15	6	22	10	31	13	16
24	13	56	12	17	8	48	4	28	0	57	0	5	2	24	6	33	10	40	13	20
28	13	54	12	11	8	38	4	18	0	52	0	7	2	32	6	44	10	49	13	25
32	13	53	12	4	8	28	4	8	0	46	0	10	2	41	6	55	10	57	13	29
36	13	51	11	56	8	17	3	58	0	40	0	13	2	50	7	5	11	5	13	33
40	13	49	11	49	8	7	3	48	0	35	0	16	2	59	7	16	11	13	13	36
44	13	47	11	42	7	57	3	38	0	31	0	19	3	9	7	26	11	20	13	38
48	13	44	11	34	7	47	3	29	0	27	0	23	3	19	7	36	11	27	13	41
52	13	41	11	27	7	36	3	19	0	23	0	27	3	29	7	47	11	34	13	44
56	13	38	11	20	7	26	3	9	0	19	0	31	3	38	7	57	11	42	13	47
60	13	36	11	13	7	16	2	59	0	16	0	35	3	48	8	7	11	49	13	49
64	13	33	11	5	7	5	2	50	0	13	0	40	3	58	8	17	11	56	13	51
68	13	29	10	57	6	55	2	41	0	10	0	46	4	8	8	28	12	4	13	53
72	13	25	10	49	6	44	2	32	0	7	0	52	4	18	8	38	12	11	13	54
76	13	20	10	40	6	33	2	24	0	5	0	57	4	28	8	48	12	17	13	56
80	13	16	10	31	6	22	2	15	0	4	1	3	4	38	8	58	12	23	13	57
84	13	11	10	21	6	11	2	7	0	3	1	9	4	48	9	7	12	29	13	58
88	13	7	10	12	6	1	1	59	0	2	1	16	4	59	9	17	12	35	13	59
92	13	2	10	3	5	51	1	52	0	1	1	23	5	9	9	26	12	40	13	59
96	12	58	9	54	5	40	1	44	0	0	1	30	5	20	9	36	12	46	14	0
100	12	52	9	45	5	30	1	37	0	0	1	37	5	30	9	45	12	52	14	0

TERTIÆ ÆQUATIONES ADDENDÆ.

Num. A.	Æquationes.	Num. A.
	′ ″	
0	3 30	1000
20	3 29	980
40	3 28	960
60	3 25	940
80	3 19	920
100	3 12	900
120	3 4	880
140	2 56	860
160	2 46	840
180	2 34	820
200	2 22	800
220	2 10	780
240	1 57	760
260	1 44	740
280	1 30	720
300	1 17	700
320	1 5	680
340	0 53	660
360	0 41	640
380	0 31	620
400	0 22	600
420	0 14	580
440	0 8	560
460	0 4	540
480	0 2	520
500	0 0	500

SEMIDURATIONES ECLIPSIUM PRIMI SATELLITIS JOVIS.

Num. A.	Semidurationes.	Num. A.	Semidurationes.	Num. A.	Semidurationes.	Num. A.	Semidurationes.
	H. ′ ″		H. ′ ″		H. ′ ″		H. ′ ″
0	1 5 9	250	1 7 0	500	1 5 9	750	1 7 46
10	1 4 56	260	1 7 15	510	1 4 53	760	1 7 57
20	1 4 44	270	1 7 31	520	1 4 39	770	1 8 7
30	1 4 33	280	1 7 45	530	1 4 26	780	1 8 15
40	1 4 23	290	1 7 57	540	1 4 15	790	1 8 22
50	1 4 14	300	1 8 7	550	1 4 7	800	1 8 26
60	1 4 7	310	1 8 15	560	1 4 3	810	1 8 28
70	1 4 4	320	1 8 22	570	1 4 1	820	1 8 30
80	1 4 2	330	1 8 27	580	1 4 0	830	1 8 28
90	1 4 0	340	1 8 28	590	1 4 3	840	1 8 26
100	1 4 2	350	1 8 29	600	1 4 7	850	1 8 22
110	1 4 3	360	1 8 27	610	1 4 13	860	1 8 16
120	1 4 6	370	1 8 24	620	1 4 23	870	1 8 8
130	1 4 12	380	1 8 17	630	1 4 35	880	1 8 0
140	1 4 21	390	1 8 9	640	1 4 49	890	1 7 50
150	1 4 31	400	1 7 58	650	1 5 4	900	1 7 37
160	1 4 42	410	1 7 46	660	1 5 19	910	1 7 22
170	1 4 55	420	1 7 31	670	1 5 36	920	1 7 8
180	1 5 9	430	1 7 14	680	1 5 54	930	1 6 55
190	1 5 23	440	1 6 58	690	1 6 10	940	1 6 40
200	1 5 39	450	1 6 40	700	1 6 28	950	1 6 23
210	1 5 55	460	1 6 20	710	1 6 46	960	1 6 8
220	1 6 11	470	1 6 2	720	1 7 2	970	1 5 54
230	1 6 26	480	1 5 45	730	1 7 17	980	1 5 37
240	1 6 43	490	1 5 26	740	1 7 33	990	1 5 22
250	1 7 0	500	1 5 9	750	1 7 46	1000	1 5 9

De harum Tabularum Conſtructione.

HÆ Tabulæ e præcedentibus confectæ, ac facilitate Calculi nullis cautionibus obnoxii plurimum ſe commendantes, in uſus *Geographicos* Longitudinibus locorum inveniendis deſtinatæ ſunt: Earum enim ope, abſque aliarum Tabularum ſubſidio, Eclipſes *Primi* Satellitis *Jovis* ſolâ Additione ſtatim obtinentur, ne mora tædiumve Computi operoſioris minus exercitatos ab his ſtudiis deterreret.

Quales autem ſint hi Numeri ut melius capiat Lector, ſciat *Epochas Conjunctionum* eſſe momenta Conjunctionis Satellitis cum loco *Jovis* medio, ab ineunte *Januario* Currentis Anni *Juliani* primæ, demptis 39′. 8″ temporis, quibus Satelles ille Æquationem *Jovis* maximam, ſive 5°. 31′. 36″ peragit. *Num.* A ubiq; eſt ipſa Anomalia media *Jovis*, Circulo in partes milleſimas, quarum ſingulæ æquipollent 21′. 36″, dividi ſuppoſito. *Num.* B autem angulus eſt quo, tempore Epochæ, medius *Jovis* locus diſtat a *Solis* vero, itidem in circuli milleſimis æſtimatus, ſed demptis $15\frac{1}{3}$ partibus, qualium eſt æquatio *Jovis* maxima.

Sublatis igitur ex Epochis æquationibus maximis, cæteræ omnes ubiq; fiunt Addendæ: Et quidem *Æquatio Conjunctionum* eſt ſumma vel differentia ipſorum 39′. 8″ ac Temporis quo æquatio *Jovis*, ad datam Anomaliam mediam A, motu Satellitis a *Jove* percurritur; unde nulla fit ad *Num.* A 260, quæ vero ad *Num.* A 740 dupla fit maximæ, ſive $1^{H.}$ 18′. 16″. Pari modo *Æquat. Num.* B eſt ſumma vel Differentia partium $15\frac{1}{3}$ & ejuſdem æquationis *Jovis* in circuli milleſimis, ſub contrario Titulo applicatæ, ac proinde dupla fit, ſive 31, ad *Num.* A 260, nulla vero ab 740. In Menſibus autem inæqualia facta ſunt *Num.* B augmenta, pro ratione inæqualitatis motus Solaris per totum Annum: Quapropter ſi *Num.* B collecto adjiciatur ejus æquatio, fiet ſumma (ſive *Numerus* B *æquatus*) angulus Commutationis dictus, *i. e.* Diſtantia *Solis* a Loco *Jovis* Heliocentrico, quocum ſumenda eſt *Æquatio Secunda*, quæ eadem cum *Æquatione Luminis*. *Æquatio* autem *Tertia* non alia eſt quam *Correctio Æquationis Luminis* cum *Num.* A capienda, pariterq; ſemper addenda.

Hoc autem artificio non ſolum Æquationes omnes fiunt Additivæ, ſed cum ordine decimali procedat uterq; Numerus A & B, multo tutius ac facilius colliguntur.

In Anno autem *Biſſextili* poſt *Februarium* auferendus eſt unus Dies è temporibus Conjunctionum hoc Calculo inventis.

EPOCHÆ

EPOCHÆ MEDIORUM MOTUUM QUINQUE SATELLITUM SATURNI.

Annis Julianis ineuntibus.	*Primus* ab Æquinoct.			*Secundus* ab Æquinoct.			*Tertius* ab Æquinoct.			*Quartus* ab Æquonoct.			*Quintus* ab Æquinoct.		
	s	°	'	s	°	'	s	°	'	s	°	'	s	°	'
1661	3	3	2	10	12	31	4	22	38	11	13	33	11	7	46
81	9	28	16	11	3	40	5	10	7	0	28	49	0	9	37
1701	4	23	31	11	24	48	5	27	35	2	14	4	1	11	28
14	5	25	15	9	11	40	6	7	2	11	19	50	11	19	2
15	9	29	50	1	21	50	3	23	59	10	10	28	6	25	29
1716	2	4	25	6	2	1	1	10	56	9	1	5	2	1	57
17	0	19	42	2	23	43	1	17	34	8	14	16	9	12	56
18	4	24	17	7	3	54	11	4	31	7	4	54	4	19	24
19	8	28	53	11	14	4	8	21	28	5	25	31	11	25	51
1720	1	3	28	3	24	15	6	8	26	4	16	8	7	2	19
1721	11	18	45	0	15	57	6	15	4	3	29	19	2	13	19
22	3	23	20	4	26	8	4	2	1	2	19	57	9	19	46
23	7	27	55	9	6	18	1	18	58	1	10	34	4	26	14
24	0	2	31	1	16	28	11	5	55	0	1	11	0	2	41
1725	10	17	48	10	8	11	11	12	34	11	14	23	7	13	41
1726	2	22	23	2	18	21	8	29	31	10	5	0	2	20	8
27	6	26	58	6	28	32	6	16	28	8	25	37	9	26	36
28	11	1	34	11	8	42	4	3	25	7	16	14	5	3	3
29	9	16	51	8	0	25	4	10	4	6	29	26	0	14	3
1730	1	21	26	0	10	35	1	27	1	5	20	3	7	20	30
1731	5	26	1	4	20	45	11	13	58	4	10	40	2	26	58
32	10	0	36	9	0	56	9	0	55	3	1	17	10	3	25
33	8	15	54	5	22	38	9	7	33	2	14	29	5	14	25
34	0	20	29	10	2	49	6	24	30	1	5	6	0	20	53
1735	4	25	4	2	12	59	4	11	27	11	25	43	7	27	20
1736	8	29	39	6	23	10	1	28	25	10	16	20	3	3	48
37	7	14	56	3	14	52	2	5	3	9	29	32	10	14	47
38	11	19	32	7	25	3	11	22	0	8	20	9	5	21	15
39	3	24	7	0	5	13	9	8	57	7	10	46	0	27	42
1740	7	28	42	4	15	23	6	25	54	6	1	23	8	4	10
1741	6	13	59	1	7	6	7	2	33	5	14	35	3	15	10
42	10	18	34	5	17	16	4	19	30	4	5	12	10	21	37
43	2	23	10	9	27	27	2	6	27	2	25	49	5	28	5
44	6	27	45	2	7	37	11	23	24	1	16	26	1	4	32
1745	5	13	2	10	29	20	0	0	3	0	29	38	8	15	32

MEDII MOTUS SATELLITUM SATURNI IN ANNIS.

Annis	Primi			Secundi			Tertii			Quarti			Quinti		
0	s	°	′	s	°	′	s	°	′	s	°	′	s	°	′
1	4	4	35	4	10	10	9	16	57	10	20	37	7	6	27
2	8	9	10	8	20	21	7	3	54	9	11	14	2	12	55
3	0	13	46	1	0	31	4	20	51	8	1	51	9	19	22
4	10	29	3	9	22	14	4	27	30	7	15	3	5	0	22
5	3	3	38	2	2	24	2	14	27	6	5	40	0	6	50
6	7	8	13	6	12	35	0	1	24	4	26	17	7	13	17
7	11	12	49	10	22	45	9	18	21	3	16	54	2	19	45
8	9	28	6	7	14	27	9	24	59	3	0	6	10	0	44
9	2	2	41	11	24	38	7	11	57	1	20	43	5	7	12
10	6	7	16	4	4	48	4	28	54	0	11	20	0	13	39
11	10	11	51	8	14	59	2	15	51	11	1	57	7	20	7
12	8	27	9	5	6	41	2	22	29	10	15	9	3	1	7
13	1	1	44	9	16	52	0	9	26	9	5	46	10	7	34
14	5	6	19	1	27	2	9	26	23	7	26	23	5	14	2
15	9	10	54	6	7	12	7	13	20	6	17	1	0	20	29
16	7	26	11	2	28	55	7	19	59	6	0	12	8	1	29
20	6	25	14	0	21	9	0	17	29	1	15	15	1	1	51
40	1	20	28	1	12	17	1	4	57	3	0	31	2	3	42
60	8	15	43	2	3	26	1	22	26	4	15	46	3	5	33
80	3	10	57	2	24	35	2	9	55	6	1	1	4	7	24

MENSIBUS INEUNTIBUS.

Menſe	s	°	′	s	°	′	s	°	′	s	°	′	s	°	′
Jan.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feb.	5	1	37	3	27	35	10	10	24	11	9	53	4	20	41
Mart.	3	1	9	6	20	33	0	21	44	8	12	3	8	27	45
Apr.	8	2	46	10	18	7	11	2	7	7	21	56	1	18	26
Maii	6	23	42	10	4	10	6	22	50	6	9	15	6	4	35
Junii	11	25	19	2	1	45	5	3	14	5	19	8	10	25	16
Julii	10	16	15	1	17	47	0	23	56	4	6	27	3	11	25
Aug.	3	17	52	5	15	22	11	4	20	3	16	20	8	2	6
Sept.	8	19	30	9	12	56	9	14	44	2	26	13	0	22	48
Octob.	7	10	25	8	28	59	5	5	27	1	13	32	5	8	56
Nov.	0	12	2	0	26	33	3	15	51	0	23	25	9	29	38
Dec.	11	2	58	0	12	36	11	6	33	11	10	44	2	15	46

MEDII MOTVS SATELLITVM SATVRNI IN DIEBVS.

Diebus.	Primi			Secundi			Tertii			Quarti			Quinti		
o	s	°	′	s	°	′	s	°	′	s	°	′	s	°	′
1	6	10	42	4	11	32	2	19	41	0	22	35	0	4	32
2	0	21	24	8	23	4	5	9	23	1	15	9	0	9	5
3	7	2	6	1	4	36	7	29	4	2	7	44	0	13	37
4	1	12	47	5	16	8	10	18	46	3	0	18	0	18	9
5	7	23	29	9	27	40	1	8	27	3	22	53	0	22	41
6	2	4	11	2	9	12	3	28	8	4	15	28	0	27	14
7	8	14	53	6	20	45	6	17	50	5	8	2	1	1	46
8	2	25	35	11	2	17	9	7	31	6	0	37	1	6	18
9	9	6	17	3	13	49	11	27	13	6	23	12	1	10	51
10	3	16	58	7	25	21	2	16	54	7	15	46	1	15	23
11	9	27	40	0	6	53	5	6	36	8	8	21	1	19	55
12	4	8	22	4	18	25	7	26	17	9	0	55	1	24	28
13	10	19	4	8	29	57	10	15	58	9	23	30	1	29	0
14	4	29	46	1	11	29	1	5	40	10	16	5	2	3	32
15	11	10	28	5	23	1	3	25	21	11	8	39	2	8	4
16	5	21	10	10	4	33	6	15	3	0	1	14	2	12	37
17	0	1	51	2	16	5	9	4	44	0	23	49	2	17	9
18	6	12	33	6	27	37	11	24	25	1	16	23	2	21	41
19	0	23	15	11	9	10	2	14	7	2	8	58	2	26	14
20	7	3	57	3	20	42	5	3	48	3	1	32	3	0	46
21	1	14	39	8	2	14	7	23	30	3	24	7	3	5	18
22	7	25	21	0	13	46	10	13	11	4	16	42	3	9	50
23	2	6	3	4	25	18	1	2	53	5	9	16	3	14	23
24	8	16	44	9	6	50	3	22	34	6	1	51	3	18	55
25	2	27	26	1	18	22	6	12	15	6	24	26	3	23	27
26	9	8	8	5	29	54	9	1	57	7	17	0	3	28	0
27	3	18	50	10	11	26	11	21	38	8	9	35	4	2	32
28	9	29	32	2	22	58	2	11	20	9	2	9	4	7	4
29	4	10	14	7	4	30	5	1	1	9	24	44	4	11	37
30	10	20	55	11	16	2	7	20	42	10	17	19	4	16	9
31	5	1	37	3	27	35	10	10	24	11	9	53	4	20	41

In Anno Biſſextili *poſt* Februarium *adde unius Diei Motum.*

MEDII MOTUS SATELLITUM SATURNI IN HORIS.

Hor.	Primi			Secundi			Tertii			Quarti			Quinti		
°	s	°	′	s	°	′	s	°	′	°	′	″	°	′	″
1	0	7	57	0	5	29	0	3	19	0	56	26	0	11	20
2	0	15	53	0	10	58	0	6	38	1	52	53	0	22	41
3	0	23	50	0	16	26	0	9	58	2	49	19	0	34	2
4	1	1	47	0	21	55	0	13	17	3	45	46	0	45	23
5	1	9	44	0	27	24	0	16	36	4	42	12	0	56	44
6	1	17	40	1	2	53	0	19	55	5	38	39	1	8	5
7	1	25	37	1	8	22	0	23	15	6	35	6	1	19	25
8	2	3	34	1	13	51	0	26	34	7	31	33	1	30	46
9	2	11	31	1	19	20	0	29	53	8	27	59	1	42	7
10	2	19	27	1	24	48	1	3	12	9	24	26	1	53	27
11	2	27	24	2	0	17	1	6	31	10	20	52	2	4	48
12	3	5	21	2	5	46	1	9	51	11	17	19	2	16	8
13	3	13	18	2	11	15	1	13	10	12	13	45	2	27	29
14	3	21	14	2	16	44	1	16	29	13	10	11	2	38	50
15	3	29	11	2	22	13	1	19	48	14	6	37	2	50	11
16	4	7	8	2	27	41	1	23	8	15	3	4	3	1	31
17	4	15	5	3	3	10	1	26	27	15	59	31	3	12	52
18	4	23	1	3	8	39	1	29	46	16	55	58	3	24	12
19	5	0	58	3	14	8	2	3	5	17	52	24	3	35	32
20	5	8	55	3	19	37	2	6	24	18	48	51	3	46	53
21	5	16	52	3	25	6	2	9	44	19	45	18	3	58	14
22	5	24	48	4	0	34	2	13	3	20	41	44	4	9	35
23	6	2	45	4	6	3	2	16	22	21	38	10	4	20	56
24	6	10	42	4	11	32	2	19	41	22	34	37	4	32	17
25	6	18	39	4	17	1	2	23	1	23	31	3	4	43	38
26	6	26	35	4	22	30	2	26	20	24	27	30	4	54	58
27	7	4	32	4	27	59	2	29	39	25	23	56	5	6	19
28	7	12	29	5	3	27	3	2	58	26	20	23	5	17	40
29	7	20	26	5	8	56	3	6	18	27	16	49	5	29	1
30	7	28	22	5	14	25	3	9	37	28	13	15	5	40	22

MEDII MOTUS SATELLITUM SATURNI IN MINUTIS HORARIIS.

	Satell. I.		Satell. II.		Satell. III.		Satell. IV.		Satell. V.			Satell. I.		Satell. II.		Satell. III.		Satell. IV.		Satell. V.	
Sec.	′	″	′	″	′	″	″	‴	″	‴	Sec.	′	″	′	″	′	″	″	‴	″	‴
Min.	°	′	°	′	°	′	′	″	′	″	Min.	°	′	°	′	°	′	′	″	′	″
1	0	8	0	5	0	3	0	56	0	11	31	4	6	2	50	1	43	29	10	5	52
2	0	16	0	11	0	7	1	53	0	23	32	4	14	2	55	1	46	30	6	6	3
3	0	24	0	16	0	10	2	49	0	34	33	4	22	3	1	1	50	31	3	6	14
4	0	32	0	22	0	13	3	46	0	45	34	4	30	3	6	1	53	32	0	6	26
5	0	40	0	27	0	17	4	42	0	57	35	4	38	3	12	1	56	32	57	6	37
6	0	48	0	33	0	20	5	39	1	8	36	4	46	3	17	2	0	33	54	6	48
7	0	56	0	38	0	23	6	35	1	19	37	4	54	3	23	2	3	34	50	7	0
8	1	4	0	44	0	27	7	31	1	30	38	5	2	3	28	2	6	35	46	7	11
9	1	12	0	49	0	30	8	28	1	42	39	5	10	3	34	2	9	36	42	7	22
10	1	19	0	55	0	33	9	24	1	53	40	5	18	3	39	2	13	37	38	7	34
11	1	27	1	0	0	37	10	20	2	5	41	5	26	3	45	2	16	38	34	7	45
12	1	35	1	6	0	40	11	17	2	16	42	5	34	3	50	2	19	39	30	7	56
13	1	43	1	11	0	43	12	14	2	28	43	5	42	3	56	2	23	40	27	8	8
14	1	51	1	17	0	46	13	10	2	39	44	5	50	4	1	2	26	41	23	8	19
15	1	59	1	22	0	50	14	7	2	50	45	5	58	4	7	2	29	42	20	8	30
16	2	7	1	28	0	53	15	3	3	1	46	6	5	4	12	2	33	43	16	8	42
17	2	15	1	33	0	56	16	0	3	13	47	6	13	4	18	2	36	44	13	8	53
18	2	23	1	39	1	0	16	56	3	24	48	6	21	4	23	2	39	45	10	9	4
19	2	31	1	44	1	3	17	52	3	36	49	6	29	4	29	2	43	46	6	9	16
20	2	39	1	50	1	6	18	49	3	47	50	6	37	4	34	2	46	47	2	9	27
21	2	47	1	55	1	10	19	40	3	58	51	6	45	4	40	2	49	47	58	9	38
22	2	55	2	1	1	13	20	42	4	9	52	6	53	4	45	2	53	48	54	9	50
23	3	3	2	6	1	16	21	38	4	21	53	7	1	4	50	2	56	49	51	10	1
24	3	11	2	12	1	20	22	35	4	32	54	7	9	4	56	2	59	50	48	10	12
25	3	19	2	17	1	23	23	31	4	43	55	7	17	5	1	3	3	51	44	10	23
26	3	27	2	22	1	26	24	27	4	55	56	7	25	5	7	3	6	52	40	10	35
27	3	35	2	28	1	30	25	24	5	6	57	7	33	5	12	3	9	53	37	10	46
28	3	42	2	33	1	33	26	20	5	17	58	7	41	5	18	3	13	54	34	10	58
29	3	50	2	39	1	36	27	17	5	29	59	7	49	5	23	3	16	55	30	11	9
30	3	58	2	44	1	40	28	13	5	40	60	7	57	5	29	3	19	56	26	11	20

TABULA LATITUDINARIA SATELLITUM SATURNI.

Argument. Latitudinis.	Sig. 0. *Bor.* 6. *Auſt.*				Sig. 1. *Bor.* 7. *Auſt.*				Sig. 2. *Bor.* 8. *Auſt.*				
	Satellitum I. II. III. IV.		Satellitis V.		Satellitum I. II. III. IV.		Satellitis V.		Satellitum I. II. III. IV.		Satellitis V.		
	Inclinat.	*Reduct.*	*Inclin.*	*Reduct.*	*Inclinat.*	*Reduct.*	*Inclinat.*	*Reduct.*	*Inclinat.*	*Reduct.*	*Inclinat.*	*Reduct.*	
Gr.	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′	
0	0 0	0 0	0 0	0 0	14 29	3 26	7 26	0 51	25 39	3 41	12 57	0 52	30
1	0 30	0 8	0 15	0 2	14 55	3 31	7 40	0 52	25 56	3 37	13 5	0 51	29
2	1 0	0 16	0 31	0 4	15 22	3 35	7 53	0 53	26 12	3 33	13 13	0 50	28
3	1 30	0 24	0 46	0 6	15 48	3 39	8 6	0 54	26 27	3 28	13 20	0 49	27
4	2 0	0 32	1 2	0 8	16 14	3 42	8 19	0 55	26 42	3 23	13 27	0 47	26
5	2 30	0 40	1 17	0 10	16 40	3 46	8 32	0 55	26 57	3 18	13 34	0 46	25
6	3 0	0 48	1 33	0 12	17 5	3 49	8 45	0 56	27 11	3 12	13 41	0 45	24
7	3 30	0 56	1 48	0 14	17 31	3 52	8 58	0 57	27 24	3 7	13 47	0 44	23
8	3 59	1 4	2 4	0 16	17 56	3 55	9 10	0 57	27 37	3 1	13 53	0 42	22
9	4 29	1 12	2 19	0 18	18 21	3 58	9 22	0 58	27 49	2 55	13 59	0 41	21
10	4 59	1 19	2 34	0 20	18 45	4 0	9 35	0 58	28 2	2 48	14 4	0 39	20
11	5 28	1 27	2 50	0 22	19 9	4 2	9 47	0 59	28 13	2 41	14 10	0 37	19
12	5 58	1 34	3 5	0 24	19 33	4 3	9 58	0 59	28 24	2 34	14 15	0 35	18
13	6 27	1 42	3 20	0 26	19 56	4 5	10 10	0 59	28 34	2 27	14 20	0 34	17
14	6 57	1 49	3 35	0 27	20 20	4 6	10 21	0 59	28 44	2 19	14 24	0 32	16
15	7 26	1 56	3 50	0 29	20 43	4 6	10 33	0 59	28 53	2 12	14 28	0 30	15
16	7 55	2 3	4 5	0 31	21 5	4 7	10 44	0 59	29 1	2 4	14 32	0 28	14
17	8 24	2 10	4 20	0 33	21 27	4 7	10 55	0 59	29 9	1 56	14 36	0 27	13
18	8 53	2 17	4 35	0 34	21 49	4 7	11 6	0 59	29 17	1 47	14 40	0 25	12
19	9 22	2 24	4 50	0 36	22 10	4 6	11 16	0 59	29 24	1 39	14 43	0 23	11
20	9 51	2 30	5 5	0 38	22 31	4 6	11 26	0 59	29 30	1 30	14 46	0 21	10
21	10 19	2 37	5 19	0 39	22 52	4 5	11 36	0 58	29 35	1 22	14 49	0 19	9
22	10 48	2 43	5 34	0 41	23 12	4 3	11 46	0 58	29 41	1 13	14 51	0 17	8
23	11 16	2 49	5 48	0 43	23 32	4 2	11 56	0 57	29 45	1 4	14 53	0 15	7
24	11 44	2 55	6 2	0 44	23 51	4 0	12 5	0 57	29 49	0 55	14 55	0 13	6
25	12 12	3 1	6 17	0 45	24 11	3 58	12 14	0 56	29 52	0 46	14 56	0 11	5
26	12 40	3 6	6 31	0 46	24 29	3 55	12 23	0 56	29 55	0 37	14 57	0 9	4
27	13 7	3 11	6 45	0 48	24 47	3 52	12 32	0 55	29 57	0 28	14 58	0 7	3
28	13 34	3 16	6 59	0 49	25 5	3 49	12 41	0 54	29 59	0 19	14 59	0 4	2
29	14 2	3 21	7 12	0 50	25 22	3 45	12 49	0 53	30 0	0 10	15 0	0 2	1
30	14 29	3 26	7 26	0 51	25 39	3 41	12 57	0 52	30 0	0 0	15 0	0 0	0
	Sig. 11. *Auſt.* 5. *Bor.*				Sig. 10. *Auſt.* 4. *Bor.*				Sig. 9. *Auſt.* 3. *Bor.*				Gr.

De Tabulis Satellitum Saturni.

HÆ Tabulæ motuum Satellitum *Saturni* meræ *Caſſinianæ* ſunt, ad Meridianum *Londinenſem* ſtylumq; *Julianum* redactæ; quas inter *Acta Academiæ Regiæ Pariſienſis* Anni 1716; præſtantiſſimus *Aſtronomus* D. *Jacobus Caſſinus* nunc primum edidit, quaſque noſtris in *Philoſophica Tranſact.* N° 356, utpote raptim confectis, merito prætulimus. Abunde quidem ſufficiunt Tabulæ ad diſtinguendos inter ſe Satellites, & ad eorum Loca juxta *Saturnum* indigitanda, qui aliàs ob parvitatem, oculis hebetioribus, ni rectè collimant, ægre in conſpectum venirent: Nondum tamen eas ultimam Celeberrimi Authoris manum recepiſſe conſtat; ſed potius Publico donari, ut earum ope commode prævideant *Aſtronomi* eas obſervandi opportunitates, quæ ad emendendam Theoriam motuum plurimum conferre poterunt.

Supponuntur autem Periodi horum Satellitum, quibus revolvuntur ad Æquinoctium, ſive ad principium *Arietis*, ſcilicet *Primi* ſive *Intimi* $1^{D.}\ 21^{H.}\ 18'\ 27''$. *Secundi Penintimi* $2^{D.}\ 17^{H.}\ 41'\ 22''$. *Tertii* ſive *Medii* $4^{D.}\ 12^{H.}\ 25'\ 12''$. *Quarti* Hugeniani $15^{D.}\ 22^{H.}\ 41'\ 12''$. *Quinti* ſive *Extimi* $79^{D.}\ 7^{H.}\ 47'\ 0''$. Poſito autem, (juxta Regulam Naturæ ſaltem in hoc noſtro Syſtemate univerſalem, quæq; tam in Jovialium ac Lunæ motibus, quam Planetarum primariorum circa Solem obtinet) Vires centrum *Saturni* petentes eſſe in duplicata ratione Diſtantiarum reciprocè, atq; adeo Cubos Diſtantiarum a Centro ejus eſſe ut quadrata Temporum Periodicorum; ex data Diſtantiâ & Periodo *Quarti*, reliquorum Diſtantiæ conſequuntur.

Nuperis autem Obſervationibus, ingenti radio Teleſcopii *Regalis Societatis* 120 Pedes ſuperante, ope Micrometri artificioſiſſimi, invenit *D. Pound* rationem Diſtantiæ Satellitis *Quarti* & maximi a centro *Saturni*, ad Semidiametrum *Annuli* ejus ut 374 ad 43, ſive ut 8,7 ad 1 proxime; rationem vero Diametri *Annuli* ad illam *Globi* eſſe ut 7 ad 3. Proinde inito Calculo proveniunt Diſtantiæ ut ſequitur.

	Semidiam. Annuli.	*Semidiam. Globi* ♄.		*Semidiam. Annuli.*	*Semidiam. Globi* ♄.
Primi	2,097	4,893	*Quarti*	8,698	20,295
Secundi	2,686	6,268	*Quinti*	25,348	59,154
Tertii	3,752	8,754			

Maii autem 29°. $10^{h.}$ hujus Anni 1719 *St. Vet.* eodem Obſervatore ac Inſtrumentis, viſus eſt *Quartus.* in maxima fere ejus a Planeta digreſſione orientali, diſtare a Centro *Saturni*, tunc ♏ 7°. 41′. occupantis, tria Minuta prima cum ſeptem Secundis. Unde computo rite inſtituto, fit ratio Diſtantiæ hujus Satellitis a *Saturno* ad Diſtantiam *Solis* a *Terra*, ut 8,25 ad 1000, e quâ cæterorum Diſtantiæ æſtimari poterunt.

Sup

Supponit autem D. *Caſſinus* Satellites quatuor Interiores ſecundum Planum *Annuli* moveri, ſive eorum Orbitas ad Planum Orbis *Saturni* angulo triginta graduum Inclinari: *Saturno* enim juxta medium Sign. *Geminorum* & *Sagittarii* exiſtente, Annuli tum latiſſime patentis Axis major ſatis præciſe duplus invenitur minoris, ac Ellipſes ſemper Annulari ſimiles deſcribere videntur hi Satellites; inq; maximis ſuis a Planeta digreſſionibus, in Axe majori Annuli producto reperiuntur: quæ quidem fieri nequeunt, ni Satellitum Orbes cum Annuli Plano eundem propemodum ſitum haberent.

Nuper vero *Annuli Nodos*, præſtantiſſimis Teleſcopiis & Oculis ſane pluſquam Lynceis, perſcrutatus eſt præclarus *Aſtronomus* D. *Maraldus*; ut in *Actis Acad. Reg. Pariſienſis* Annorum 1715 & 1716 videre eſt. Demonſtrat enim Obſervationibus perquam ſubtilibus, Planum Annuli Anno 1715 interſecaſſe Planum Orbis *Saturni* ad Grad. 9°. 45 Min. *Virginis* & *Piſcium*; ac conceſſo Inclinationis Angulo 30 Grad. idem Annuli Planum cum Plano *Eclipticæ* ſive Orbe *Terræ* occurriſſe ad 16°¼ ♍ & ♓, ſub Inclinatione 31°. 20′.

Ut itaq; ad datum Tempus cognoſcantur accuratè tam *Ellipſeos Annularis*, quam earum quas Satellites deſcribunt, Poſitio, Species punctumq; vere *Apogæum* & *Perigæum*, reſolvendum eſt Triangulum Sphæricum obliquangulum, modo inter Præcepta Calculi Latitudinum Jovialium ſupra monſtrato.

Cum autem Latitudo *Terræ* reſpectu Orbis *Saturni* vix unquam excedat quartam gradus partem, ea in hoc negotio, hactenus parum explorato, tuto negligi poteſt, quaſi in eodem Plano moveretur uterq; Planeta. Proinde è loco Geocentrico *Saturni* ſubducantur 5 *Sig.* 19°. 45′, ac reſtabit Argumentum Latitudinis; cum quo, in *Tabulâ Latitudinariâ Satellitum* I. II. III. IV, capiatur Inclinatio, qui eſt Angulus quo radius viſualis a *Terrâ* ad *Saturnum* ductus ſuper Orbes Satellitum illorum inclinatur; cujuſq; Sinus eſt ad Radium ut minores Orbium apparentium Diametri ad majores: Ejuſdemq; Speciei fit *Ellipſis Annuli*, Semicirculo Apogæo *Boream* reſpiciente ſi Argumentum Latitudinis minus ſit ſex Signis, *Auſtrum* vero ſi majus. Addidimus etiam *Tabulam Reductionum*, ad cognitionem veri Apogæi Satellitum, in tantâ Planorum Inclinatione, neceſſario requiſitam.

Quintum autem & exteriorem Satellitem in Orbe a cæteris multum diverſo circumferri, nuper deprehendit laudatus D. *Caſſinus*; Nodo ejus Aſcendente apud 5°. 00′ ♍ reperto, cum Angulo Inclinationis 15° tantum graduum, ſive prioris dimidio. Quapropter huic etiam Tabulam Inclinationum & Reductionum accommodavimus.

SYNOPSIS ASTRONOMIÆ COMETICÆ.

QUA

COMETARUM

Hactenus debite obſervatorum

Motus in Orbe Parabolico

REPRÆSENTANTUR;

EORUMQUE

Qui Annis MDCLXXX & MDCLXXXII fulſêre

Poſt certas Periodos redeuntium,

Motus in Orbibus Ellipticis

accurato calculo ſubjiciuntur.

SYNOPSIS

ASTRONOMIÆ COMETICÆ.

VETERES *Ægyptii* & *Chaldæi*, ſiqua fides *Diodoro Siculo*, longa obſervationum ſerie inſtructi, Cometarum ἐπιτολὰς prænuntiare valuerunt. Cum autem iiſdem artibus etiam Terræ-motus ac Tempeſtates prævidiſſe dicantur, extra dubium eſt Aſtrologiæ potius calculo fatidico, quam Aſtronomicis motuum Theoriis eorum de his rebus ſcientiam referendam eſſe. Ac vix alia à *Græcis* utriuſque populi victoribus reperta eſt apud eos doctrina; adeo ut eam, quam nunc eouſque proveximus Aſtronomiam, *Græcis* ipſis, præſertim magno *Hipparcho*, uti Inventoribus, acceptam debeamus. Apud hos vero *Ariſtotelis* ſententia, qui Cometas nihil aliud eſſe voluit quam Vapores ſublunares vel etiam Meteora aerea, tantum effecit, ut hæc Aſtronomicæ ſcientiæ pars longe ſubtiliſſima, omnino neglecta manſerit; cum nemini operæ pretium viſum fuerit, vagas & incertas fluitantium in æthere vaporum ſemitas adnotare ſcriptiſque mandare; unde factum ut ab illis nihil certi de motu Cometarum ad nos tranſmiſſum reperiatur.

Seneca autem Philoſophus, perpenſis duorum inſignium ſui temporis Cometarum Phænomenis, non dubitavit iis loca inter Corpora cœleſtia aſſignare, Sydera eſſe cum Mundo duratura exiſtimans, quanquam Motus eorum legibus nondum compertis regi fateatur. Tandemque Vaticinio non irrito promittit, aliquando futura ſecula, quibus hæc tam occulta *dies extraheret ac longioris ævi diligentia*; quibuſque admirationi foret hæc *Veteres* neſcire potuiſſe; poſtquam *Demonſtraverit aliquis* Naturæ Interpres *in quibus Cœli partibus Cometæ errent, quanti qualeſque ſint*. Ab hac autem *Senecæ* ſententia in diverſas partes abiit pene omnis Aſtronomorum cohors; ac ipſe *Seneca* neque Phænomena Motus quibus opinionem hanc tueretur, neque tempora adſcribere dignatus eſt, quæ Poſteris ad hæc definienda uſui forent. Ac evolutis plurimis Cometarum Hiſtoriis, nihil omnino invenio quod huic negotio inſervire poſſit, ante annum à *Chriſto* nato 1337, quo *Nicephorus Gregoras* Hiſtoricus & Aſtronomus *Conſtantinopolitanus* nobis Cometæ ſemitam inter Fixas ſatis accurate deſcripſit; Tempora autem nimis laxe conſignavit, ita ut non niſi quod abhinc quadringentis pene Annis apparuerit, lubricus & incertus hic Cometa Catalogo quem

damus

damus inſeri mereatur. Dein Cometa Anni 1472 omnium velociſſimus ac terris proximus *Regiomontanum* habuit obſervatorem. Hic magnitudine ac Comâ terribilis, unius diei ſpatio 40 gradus ſub circulo Cœli maximo emenſus eſt, ac omnium primus eſt de quo obſervata idonea ad nos pervenêre. Quotquot autem Cometas conſiderarunt, uſque ad tempora *Tychonis Brahe* magni illius Aſtronomiæ reſtauratoris, eos ſublunares eſſe autumârunt, adeoq; parvi penderunt, utpote pro Vaporibus habitos.

Anno autem 1577, *Tychone* jam ſtudio Aſtrorum ſerio incumbente, comparatiſque Machinis ingentibus pro dimetiendis cœli arcubus, majori cum cura & certitudine quam Veteribus ſperare fas erat; emerſit Cometa ſatis conſpicuus, cui obſervando ſtrenue ſeſe accinxit *Tycho*: multiſque & fidis Experimentis deprehendit, nulli quæ ſentiretur Parallaxi diurnæ obnoxium fuiſſe, adeoque non tantum non fuiſſe Vaporem aereum, ſed & etiam multo ſuperiorem extitiſſe Lunâ: Imo nihil obſtabat, quin inter ipſos Planetas collocaretur; fruſtra interim contra obſtrepentibus Scholaſticorum nonnullis.

Tychonis vero eximiam in obſervando induſtriam excepit *Kepleri* ſagaciſſimum & pene divinum ingenium. Hic *Tychonis* laboribus fretus Syſtema Mundi verum & Phyſicum adinvenit, ac ſcientiam Aſtronomicam in immenſum auxit; Monſtrato ſc. Planetas omnes in Planis per Solis centrum tranſeuntibus revolvi, Curvaſque Ellipticas deſcribere, ea lege, ut Areæ Sectorum Ellipticorum, ad centrum Solis in Ellipſeos foco conſtituti, temporibus quibus deſcribantur arcus ſemper proportionales ſint. Invenit etiam Diſtantias Planetarum à Sole eſſe in ſeſquialtera ratione Temporum periodicorum, ſive Cubos Diſtantiarum eſſe ut Quadrata Temporum. Tanto autem Artifici affulſere duo Cometæ, quorum alter maxime illuſtris. Ex horum obſervatis concluſit *Keplerus*, non uno Parallaxis annuæ indicio, Cometas inter Orbes Planetarum liberrime quaquaverſum ferri, motu quidem non multum à rectilineo diverſo, ſed quem nondum definire licuit. Ac *Hevelius Tychonis* æmulus, *Kepleri* veſtigiis inſiſtens, eandem Hypotheſim Motus rectilinei amplexus eſt, ipſe plurium Cometarum Obſervator perquam ſubtilis. Cum Cœlo tamen Calculum ſuum non penitus conſentire queſtus eſt, Viamque Cometicam verſus Solem incurvari ſuboluit.

Tandem de ſummo Cœlo lapſus eſt prodigioſus ille Cometa Anni 1680, quaſi Caſu perpendiculari Solem petens, & exinde pari cum velocitate aſſurgens: Hic per quatuor Menſes continuos viſus, inſigni ac peculiari Curvitate Orbitæ ad inveſtigationem Motus Theoriæ præ cæteris idoneus erat: Inſtructis autem jampridem Regiis Obſervatoriis, *Pariſienſi* & *Grenovicenſi*, ac Aſtronomorum

morum Clariſſimorum curæ commiſſis, accidit ut hujus Cometæ Motus apparens, quantum forſan mortalibus fas eſt, accuratiſſime à *Caſſino* & *Flamſtedio* obſervaretur.

Non multo poſt, dum Geometrarum facile Princeps *D. Newtonus* operam dabat *Principiis Philoſophiæ Mathematicis*; non ſolum Inventa *Kepleri* in Syſtemate Planetario neceſſariò locum habere demonſtravit, verum etiam Cometarum Phænomena omnia ex iiſdem Principiis evidenter conſequi. Id quod exemplo prædicti Cometæ Anni 1680 abunde illuſtravit, modumque docuit Geometricè conſtruendi Orbitas Cometarum; Problemaque arduum ac tanto Oedipo dignum ſumma cum omnium admiratione ſolutum dedit. Cometam autem hunc in Orbe ad ſenſum Parabolico Solem circumiiſſe probat, ita ut Areæ ad Centrum Solis æſtimatæ Temporibus proportionales fuerint.

Tanti Viri veſtigia inſecutus eandem methodum Calculo Arithmetico accommodare aggreſſus ſum, nec irrito conamine. Undique enim conquiſitis Cometarum Obſervationibus, Tabellam hanc, immenſi pene Calculi fructum, obtinui; exiguum quidem ſed non ingratum Aſtronomis munus. Hi etenim Numeri vim habent omnia quæ de motu Cometarum hactenus obſervata ſunt ſat accuratè repræſentandi, ope ſolius Tabulæ Generalis inſequentis, cui adornandæ nullis ſane peperci laboribus, ut perfecta prodiret, utpote Poſteritati conſecrata ac cum Scientia Aſtronomica duratura.

Conſtat autem hæc Elementorum Tabula decem columellis, quarum *Prima* habet Annos quo viſi ſunt Cometæ. *Secunda* ac *Tertia* ſitus Planorum Orbium Cometicorum exhibent, nempe quibus Eclipticæ punctis Nodi Aſcendentes temporibus apparitionum hærebant, & quo Angulo ad Planum ejus inclinabantur Orbes. *Quarta* habet Loca Periheliorum, ſive Verticum Orbium Parabolicorum in Orbibus ipſis æſtimatæ. *Quinta* dat diſtantias minimas Cometarum à Sole in Periheliis ſuis, in ejuſmodi partibus quales media Solis à Terrâ diſtantia habet centies millenas. In *Sexta* habentur Logarithmi rationum iſtarum diſtantiarum ad mediam illam Solis diſtantiam. *Septima* continet Logarithmos mediorum motuum diurnorum, tempore quo peragit Cometa nonaginta gradus Orbis ſui à Perihelio in centenas partes dividi ſuppoſito. *Octava* exhibet tempora æquata Periheliorum in Meridiano *Londinenſi* & Stylo *Juliano*. *Nona* dat Angulos in planis Orbium inter Perihelia & Nodos Aſcendentes interceptos, quorum ope paulo paratior fit calculus. *Decima* deniq; monſtrat qui moti fuerant Cometæ ſecundum Seriem Signorum, qui vero è contra Retrogradi fuerant.

MOTUUM COMETARUM IN ORBE PARABOLICO ELEMENTA ASTRONOMICA.

Cometæ Anni.	Nodus Aſcend.				Inclin. Orbitæ.			Perihelion.				Diſtantia Perihelia à Sole.	Logarithmus Diſtantiæ Perihelia à Sole.	Logarithmus Medii Motus Diurni.	Temp. Æquat. Perihel.				Perihel. à Nodo.			
		°	′	″	°	′	″		°	′	″					D.	H.	′	°	′	″	
1337	♊	24	21	0	32	11	0	♉	7	59	0	40666	9 609236	0 546274	*Junii*	2	6	25	46	22	0	Retrog.
1472	♑	11	46	20	5	20	0	♉	15	33	30	54273	9 734584	0 358252	*Feb.*	28	22	23	123	47	10	Retrog
1531	♉	19	25	0	17	56	0	♒	1	39	0	56700	9 753583	0 329754	*Aug.*	24	21	18	107	46	0	Retrog.
1532	♊	20	27	0	32	36	0	♋	21	7	0	50910	9 706803	0 399924	*Oct.*	19	22	12	30	40	0	Direct.
1556	♍	25	42	0	32	6	30	♑	8	50	0	46390	9 666424	0 460492	*Apr.*	21	20	3	103	8	0	Direct.
1577	♈	25	52	0	74	32	45	♌	9	22	0	18342	9 263447	1 064958	*Oct.*	26	18	45	103	30	0	Retrog.
1580	♈	18	57	20	64	40	0	♋	19	5	50	59628	9 775450	0 296953	*Nov.*	28	15	0	90	8	30	Direct.
1585	♉	7	42	30	6	4	0	♈	8	51	0	109358	0 038850	9 901853	*Sept.*	27	19	20	28	51	30	Direct.
1590	♍	15	30	40	29	40	40	♏	6	54	30	57661	9 760882	0 318805	*Jan.*	29	3	45	51	23	50	Retrog.
1596	♒	12	12	30	55	12	0	♏	18	16	0	51293	9 710058	0 395041	*Julii*	31	19	55	83	56	30	Retrog.
1607	♉	20	21	0	17	2	0	♒	2	16	0	58680	9 768490	0 307393	*Oct.*	16	3	50	108	5	0	Retrog.
1618	♊	16	1	0	37	34	0	♈	2	14	0	37975	9 579498	0 590881	*Oct.*	29	12	23	73	47	0	Direct.
1652	♊	28	10	0	79	28	0	♈	28	18	40	84750	9 928140	0 067918	*Nov.*	2	15	40	59	51	20	Direct.
1661	♊	22	30	30	32	35	50	♋	25	58	40	44851	9 651772	0 482470	*Jan.*	16	23	41	33	28	10	Direct.
1664	♊	21	14	0	21	18	30	♌	10	41	25	102575½	0 011044	9 943562	*Nov.*	24	11	52	49	27	25	Retrog.
1665	♏	18	2	0	76	5	0	♊	11	54	30	10649	9 027309	1 419164	*Apr.*	14	5	15	156	7	30	Retrog.
1672	♑	27	30	30	83	22	10	♉	16	59	30	69739	9 843476	0 194914	*Feb.*	20	8	37	109	29	0	Direct.
1677	♏	26	49	10	79	3	15	♌	17	37	5	28059	9 448072	0 788020	*Apr.*	26	0	37	99	12	5	Retrog.
1680	♑	2	2	0	60	56	0	♐	22	39	30	00612½	7 787106	3 279469	*Dec.*	8	0	6	9	22	30	Direct.
1682	♉	21	16	30	17	56	0	♒	2	52	45	58328	9 765877	0 311313	*Sept.*	4	7	39	108	23	45	Retrog.
1683	♍	23	23	0	83	11	0	♊	25	29	30	56020	9 748343	0 337614	*Julii*	3	2	50	87	53	30	Retrog.
1684	♐	28	15	0	65	48	40	♏	28	52	0	96015	9 982339	9 986620	*Maii*	29	10	16	29	23	0	Direct.
1686	♓	20	34	40	31	21	40	♊	17	0	30	32500	9 511883	0 692304	*Sept.*	6	14	33	86	25	50	Direct.
1698	♐	27	44	15	11	46	0	♑	0	51	15	69129	9 839660	0 200638	*Oct.*	8	16	57	3	7	0	Retrog.

TABULA GENERALIS MOTUUM COMETARUM IN ORBE PARABOLICO.

Med. Mot Com.	Angulus à Perihelio.	Differentia Angulorum.	Logarithmus pro distantiâ à Sole.	Differentia Logarithm.	Med. Mot. Com.	Angulus à Perihelio.	Differentia Angulorum.	Logarithmus pro distantiâ à Sole.	Differentia Logarithm.
	° ′ ″	° ′ ″				° ′ ″	° ′ ″		
0	0 0 0		0,000000		30	41 45 47		0,059009	
		1 31 40		77			1 9 19		3391
1	1 31 40		0,000077		31	42 55 6		0,062400	
		1 31 35		232			1 8 14		3438
2	3 3 15		0,000309		32	44 3 20		0,065838	
		1 31 28		385			1 7 9		3481
3	4 34 43		0,000694		33	45 10 29		0,069319	
		1 31 17		537			1 6 6		3520
4	6 6 0		0,001231		34	46 16 35		0,072839	
		1 31 1		690			1 5 1		3557
5	7 37 1		0,001921		35	47 21 36		0,076396	
		1 30 42		838			1 3 57		3588
6	9 7 43		0,002759		36	48 25 33		0,079984	
		1 30 19		986			1 2 54		3616
7	10 38 2		0,003745		37	49 28 27		0,083600	
		1 29 52		1131			1 1 52		3644
8	12 7 54		0,004876		38	50 30 19		0,087244	
		1 29 23		1275			1 0 49		3666
9	13 37 17		0,006151		39	51 31 8		0,090910	
		1 28 50		1413			0 59 48		3686
10	15 6 7		0,007564		40	52 30 56		0,094596	
		1 28 13		1551			0 58 48		3704
11	16 34 20		0,009115		41	53 29 44		0,098300	
		1 27 34		1683			0 57 48		3719
12	18 1 54		0,010798		42	54 27 32		0,102019	
		1 26 53		1811			0 56 49		3733
13	19 28 47		0,012609		43	55 24 21		0,105752	
		1 26 7		1941			0 55 51		3738
14	20 54 54		0,014550		44	56 20 12		0,109490	
		1 25 20		2057			0 54 54		3750
15	22 20 14		0,016607		45	57 15 6		0,113240	
		1 24 30		2176			0 53 57		3755
16	23 44 44		0,018783		46	58 9 3		0,116995	
		1 23 38		2289			0 53 1		3761
17	25 8 22		0,021072		47	59 2 4		0,120756	
		1 22 46		2398			0 52 7		3762
18	26 31 8		0,023470		48	59 54 11		0,124518	
		1 21 47		2499			0 51 14		3760
19	27 52 55		0,025969		49	60 45 25		0,128278	
		1 20 52		2601			0 50 20		3757
20	29 13 47		0,028570		50	61 35 45		0,132035	
		1 19 53		2693			0 49 29		3757
21	30 33 40		0,031263		51	62 25 14		0,135792	
		1 18 52		2782			0 48 38		3752
22	31 52 32		0,034045		52	63 13 52		0,139544	
		1 17 51		2871			0 47 48		3747
23	33 10 23		0,036916		53	64 1 40		0,143291	
		1 16 49		2948			0 46 58		3738
24	34 27 12		0,039864		54	64 48 38		0,147029	
		1 15 47		3028			0 46 12		3733
25	35 42 59		0,042892		55	65 34 50		0,150762	
		1 14 42		3097			0 45 23		3720
26	36 57 41		0,045989		56	66 20 13		0,154482	
		1 13 39		3165			0 44 37		3710
27	38 11 20		0,049154		57	67 4 50		0,158192	
		1 12 34		3228			0 43 52		3698
28	39 23 54		0,052382		58	67 48 42		0,161890	
		1 11 29		3286			0 43 8		3688
29	40 35 23		0,055668		59	68 31 50		0,165578	
		1 10 24		3341			0 42 26		3676
30	41 45 47		0,059009		60	69 14 16		0,169254	

TABULA GENERALIS MOTUUM COMETARUM IN ORBE PARABOLICO.

Med. Mot. Com.	Angulus à Perihelio.	Differentia Angulorum.	Logarithmus pro diſtantiâ à Sole.	Differentia Logarithm.	Med. Mot. Com.	Angulus à Perihelio.	Differentia Angulorum.	Logarithmus pro diſtantiâ à Sole.	Differentia Logarithm.
	° ′ ″	° ′ ″				° ′ ″	° ′ ″		
60	69 14 16		0,169254		90	85 54 27		0,271092	
		0 41 42		3660			0 26 7		3084
61	69 55 58		0,172914		91	86 20 34		0,274176	
		0 40 58		3643			0 25 46		3063
62	70 36 56		0,176557		92	86 46 20		0,277239	
		0 40 20		3631			0 25 23		3045
63	71 17 16		0,180188		93	87 11 43		0,280284	
		0 39 40		3615			0 25 2		3022
64	71 56 56		0,183803		94	87 36 45		0,283306	
		0 39 1		3601			0 24 42		3002
65	72 35 57		0,187404		95	88 1 27		0,286308	
		0 38 18		3574			0 24 21		2983
66	73 14 15		0,190978		96	88 25 48		0,289291	
		0 37 41		2562			0 24 0		2960
67	73 51 59		0,194540		97	88 49 48		0,292251	
		0 37 7		3545			0 23 42		2944
68	74 29 6		0,198085		98	89 13 30		0,295195	
		0 36 32		3529			0 23 24		2927
69	75 5 38		0,201614		99	89 36 54		0,298122	
		0 35 57		3508			0 23 6		2908
70	75 41 35		0,205122		100	90 0 0		0,301030	
		0 35 21		3490			0 45 14		5752
71	76 16 56		0,208612		102	90 45 14		0,306782	
		0 34 47		3468			0 44 4		5678
72	76 51 43		0,212080		104	91 29 18		0,312460	
		0 34 14		3449			0 42 56		5600
73	77 25 57		0,215529		106	92 12 14		0,318060	
		0 33 44		3434			0 41 50		5527
74	77 59 41		0,218963		108	92 54 4		0,323587	
		0 33 13		3415			0 40 48		5455
75	78 32 54		0,222378		110	93 34 52		0,329042	
		0 32 42		3394			0 39 48		5382
76	79 5 36		0,225772		112	94 14 40		0,334424	
		0 32 9		3371			0 38 50		5312
77	79 37 45		0,229143		114	94 53 30		0,339736	
		0 31 39		3347			0 37 52		5243
78	80 9 24		0,232490		116	95 31 22		0,344979	
		0 31 10		3329			0 37 0		5174
79	80 40 34		0,235819		118	96 8 22		0,350153	
		0 30 42		3308			0 36 8		5109
80	81 11 16		0,239127		120	96 44 30		0,355262	
		0 30 15		3289			0 35 18		5044
81	81 41 31		0,242416		122	97 19 48		0,360306	
		0 29 48		3268			0 34 29		4978
82	82 11 19		0,245684		124	97 54 17		0,365284	
		0 29 21		3249			0 33 43		4916
83	82 40 40		0,248933		126	98 28 0		0,370200	
		0 28 54		3226			0 32 57		4852
84	83 9 34		0,252159		128	99 0 57		0,375052	
		0 28 30		3207			0 32 14		4792
85	83 38 4		0,255366		130	99 33 11		0,379844	
		0 28 4		3186			0 31 32		4732
86	84 6 8		0,258552		132	100 4 43		0,384576	
		0 27 41		3168			0 30 52		4674
87	84 33 49		0,261720		134	100 35 35		0,389250	
		0 27 16		3145			0 30 13		4618
88	85 1 5		0,264865		136	101 5 48		0,393868	
		0 26 53		3124			0 29 34		4560
89	85 27 58		0,267989		138	101 35 22		0,398428	
		0 26 29		3103			0 28 57		4502
90	85 54 27		0,271092		140	102 4 19		0,402930	

TABULA GENERALIS MOTUUM COMETARUM IN ORBE PARABOLICO.

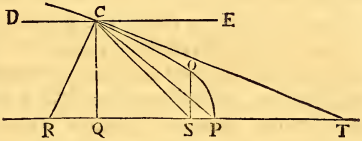
Med. Mot. Com.	Angulus à Perihelio.	Differentia Angulorum.	Logarithmus pro distantiâ à Sole.	Differentia Logarithm.	Med. Mot. Com.	Angulus à Perihelio.	Differentia Angulorum.	Logarithmus pro distantiâ à Sole.	Differentia Logarithm.
	° ′ ″	′ ″				° ′ ″	′ ″		
140	102 4 19		0,402930		200	113 4 0		0,516984	
		28 22		4450			33 25		6422
142	102 32 41		0,407380		204	113 37 25		0,523406	
		27 50		4404			32 27		6299
144	103 0 31		0,411784		208	114 9 52		0,529705	
		27 17		4348			31 31		6181
146	103 27 47		0,416132		212	114 41 23		0,535886	
		26 44		4298			30 39		6072
148	103 54 31		0,420430		216	115 12 2		0,541958	
		26 12		4246			29 49		5964
150	104 20 43		0,424676		220	115 41 51		0,547922	
		25 39		4190			29 1		5860
152	104 46 22		0,428866		224	116 10 52		0,553782	
		25 11		4146			28 15		5756
154	105 11 33		0,433012		228	116 39 7		0,559538	
		24 43		4098			27 31		5661
156	105 36 16		0,437110		232	117 6 38		0,565199	
		24 16		4054			26 49		5563
158	106 0 32		0,441164		236	117 33 27		0,570762	
		23 51		4014			26 8		5471
160	106 24 23		0,445178		240	117 59 35		0,576233	
		23 24		3966			25 30		5383
162	106 47 47		0,449144		244	118 25 5		0,581616	
		22 57		3916			24 52		5296
164	107 10 44		0,453060		248	118 49 57		0,586912	
		22 33		3876			24 17		5210
166	107 33 17		0,456936		252	119 14 14		0,592122	
		22 10		3836			23 42		5130
168	107 55 27		0,460772		256	119 37 56		0,597252	
		21 47		3795			23 10		5049
170	108 17 14		0,464567		260	120 1 6		0,602301	
		21 24		3751			22 38		4973
172	108 38 38		0,468318		264	120 23 44		0,607274	
		21 2		3712			22 8		4900
174	108 59 39		0,472030		268	120 45 52		0,612174	
		20 41		3675			21 38		4824
176	109 20 20		0,475705		272	121 7 30		0,616998	
		20 20		3635			21 9		4752
178	109 40 40		0,479340		276	121 28 39		0,621750	
		20 0		3597			20 43		4688
180	110 0 40		0,482937		280	121 49 22		0,626438	
		19 40		3561			20 16		4618
182	110 20 20		0,486498		284	122 9 3		0,631056	
		19 21		3524			19 50		4552
184	110 39 41		0,490022		288	122 29 28		0,635608	
		19 3		3490			19 26		4490
186	110 58 44		0,493512		292	122 48 54		0,640098	
		18 44		3453			19 3		4427
188	111 17 28		0,496965		296	123 7 57		0,644525	
		18 27		3419			18 39		4368
190	111 35 55		0,500384		300	123 26 36		0,648893	
		18 10		3385			45 4		10666
192	111 54 5		0,503769		310	124 11 40		0,659559	
		17 53		3352			42 56		10321
194	112 11 58		0,507121		320	124 54 36		0,669880	
		17 36		3320			40 58		9996
196	112 29 34		0,510441		330	125 35 34		0,679876	
		17 21		3288			39 10		9692
198	112 46 55		0,513729		340	126 14 44		0,689568	
		17 5		3255			37 28		9402
200	113 4 0		0,516984		350	126 52 12		0,698970	

TABULA GENERALIS MOTUUM COMETARUM IN ORBE PARABOLICO.

Med. Mot. Com.	Angulus à Perihelio.	Differentia Angulorum.	Logarithmus pro distantiâ à Sole.	Differentia Logarithm.	Med. Mot. Com.	Angulus à Perihelio.	Differentia Angulorum.	Logarithmus pro distantiâ à Sole.	Differentia Logarithm.
	° ′ ″	′ ″				° ′ ″	° ′ ″		
350	126 52 12		c,698970		800	141 28 3		0,963082	
		35 54		9134			0 21 21		7754
360	127 28 6		0,708104		820	141 49 24		0,970836	
		34 27		8872			0 20 36		7561
370	128 2 33		0,716976		840	142 10 0		0,978397	
		33 5		8630			0 19 56		7374
380	128 35 38		0,725606		860	142 29 56		0,985771	
		31 49		8400			0 19 14		7199
390	129 7 27		0,734006		880	142 49 10		0,992970	
		30 37		8180			0 18 38		7030
400	129 38 4		0,742186		900	143 7 48		1,000000	
		29 30		7974			0 18 3		6871
410	130 7 34		0,750160		920	143 25 51		1,006871	
		28 28		7770			0 17 30		6715
420	130 36 2		0,757930		940	143 43 21		1,013586	
		27 28		7586			0 16 57		6569
430	131 3 30		0,765516		960	144 0 18		1,020155	
		26 32		7402			0 16 28		6428
440	131 30 2		0,772918		980	144 16 46		1,026583	
		25 39		7230			0 16 0		6293
450	131 55 41		0,780148		1000	144 32 46		1,032876	
		24 49		7068			4 53 22		125312
460	132 20 30		0,787216		1500	149 26 8		1,158188	
		24 2		6910			3 0 7		87870
470	132 44 32		0,794126		2000	152 26 15		1,246058	
		23 18		6756			2 6 5		67645
480	133 7 50		0,800882		2500	154 32 20		1,313703	
		22 35		6612			1 35 7		54975
490	133 30 25		0,807494		3000	156 7 27		1,368678	
		21 55		6475			1 15 22		46295
500	133 52 20		0,813969		3500	157 22 49		1,414973	
		41 58		12553			1 1 45		39951
520	134 34 18		0,826522		4000	158 24 34		1,454924	
		39 38		12061			0 52 2		35201
540	135 13 56		0,838583		4500	159 16 36		1,490125	
		37 32		11604			0 44 36		31396
560	135 51 28		0,850187		5000	160 1 12		1,521521	
		35 38		11182			0 38 53		28353
580	136 27 6		0,861369		5500	160 40 5		1,549874	
		33 51		10786			0 34 19		25844
600	137 0 57		0,872155		6000	161 14 24		1,575718	
		32 16		10420			0 30 36		23742
620	137 33 13		0,882575		6500	161 45 0		1,599460	
		30 45		10074			0 27 34		21957
640	138 3 58		0,892649		7000	162 12 34		1,621417	
		29 23		9752			0 25 0		20421
660	138 33 21		0,902401		7500	162 37 34		1,641838	
		28 8		9449			0 22 49		19084
680	139 1 29		0,911850		8000	163 0 23		1,660922	
		26 56		9162			0 20 57		17912
700	139 28 25		0,921012		8500	163 21 20		1,678834	
		25 51		8895			0 19 22		16874
720	139 54 16		0,929907		9000	163 40 42		1,695708	
		24 49		8642			0 17 56		15954
740	140 19 5		0,938549		9500	163 58 38		1,711662	
		23 51		8402			0 16 42		15122
760	140 42 56		0,946951		10000	164 15 20		1,726784	
		22 59		8173			6 36 40		471176
780	141 5 55		0,955124		50000	170 52 0		2,197960	
		22. 8		7958			1 53 44		201695
800	141 28 3		0,963082		100000	172 45 44		2,399655	

Tabulæ Generalis Conſtructio & Uſus.

UT Planetæ in Orbibus Ellipticis, ita Cometæ (ut dictum eſt) in Parabolicis Solem in Foco communi ſitum ambiunt, ea lege ut Areæ æquales æqualibus temporibus deſcribantur. Quoniam vero Parabolæ omnes ſunt Curvæ ſimiles, ſi eductis è Foco rectis, determinata aliqua pars Areæ Parabolæ cujuſvis dividatur utcunque, in omnibus Parabolis fiet ſimilis diviſio ſub iiſdem Angulis, ac diſtantiæ à Foco erunt reſpectivè proportionales: Proinde una noſtra Tabula pro Cometis omnibus ſufficiet. Calculi autem hujus Tabulæ hæc eſt ratio. In Schemate ſit *S* Sol, P O C orbita Cometæ, P Perihelion, O Locus ubi Cometa quadrante diſtat à Perihelio, C Locus quivis alius. Junge CP, C*S*, ac fiant *S*T, *S*R æquales ipſi C*S*, & ductis rectis CR, CT, (quarum altera tanget Curvam in C, altera vero eidem perpendicularis erit) in Axem P*S*R demitte normalem CQ. Jam datâ areâ quacunque COPS $= a$, oporteat angulum CSP & diſtantiam CS inquirere.



Quoniam ob naturam Parabolæ recta RQ ubiq; æqualis eſt dimidio Lateris recti, ponatur Latus rectum $= 2$, adeoq; RQ $= 1$; ac ſit CQ $= z$, proinde PQ $= \frac{1}{2}zz$, ac Segmentum Parabolicum COP $= \frac{1}{12}zzz$; Triangulum autem CSP erit $= \frac{1}{4}z$: Unde Area mixtilinea COPS erit $= \frac{1}{12}z^3 + \frac{1}{4}z = a$, ac $z^3 + 3z = 12a$. Quare reſoluta hac æquatione Cubica, z ſive ordinatim applicata CQ innoteſcet. Proponatur jam Area OPS in partes centeſimas dividenda. Hæc Area duodecima pars eſt quadrati è Latere recto, adeoq; $12a$ æquantur quadrato illo $= 4$. Si itaque ſucceſſivè extrahantur radices æquationum $z^3 + 3z = 0{,}04 : 0{,}08 : 0{,}12 : 0{,}16$, *&c.* habebuntur totidem z ſive ordinatim applicatæ CQ reſpectivè, ac diviſa erit Area SOP in partes centum æquales. Eodemq; prorſus modo continuandus eſt calculus ultra Locum O. Cum autem RQ ſit $= 1$, radix hujus Æquationis ſit Tangens Tabularis anguli CRQ ſive dimidii anguli CSP, adeoq; angulus CSP datur. Ejuſdemq; anguli CRQ, Secans RC media proportionalis eſt inter RQ $=$ 2PS & RT quæ dupla eſt ipſius SC, ut ex Conicis notiſſimum eſt. Eſt igitur SP ad SC in duplicatâ ratione Radii ad Secantem anguli dimidii à Perihelio Cometæ; vel ſi mavis, in ratione quam habet Sinus Verſus anguli CSR, ſive anguli ab Aphelio Cometæ, ad Diametrum

metrum Circuli. His jactis fundamentis præcedentem Tabulam elaboravi, repræſentandis omnium Cometarum motibus inſervientem: Nullus enim ex hactenus obſervatis motus Parabolici Leges quoad ſenſum recuſat.

Reſtat jam præcepta Calculi tradere, modumq; ſupputandi locum Cometæ viſum ex his Numeris exhibere. Cometæ autem in Parabolâ moventis Velocitas ubiq; eſt ad velocitatem Planetæ gyrantis in Circulo circa Solem, ad eandem a Sole diſtantiam, ut $\surd 2$ ad 1; ut conſtat ex *Principiis Philoſ. Nat. Math. Lib.* I. *Prop.* 16. *Coroll.* 7. Si itaque Cometa in Perihelio ad diſtantiam æqualem diſtantiæ Terræ à Sole ſupponatur, foret Area diurna à Cometa deſcripta ad Aream quam deſcribit Terra ut $\surd 2$ ad 1, ac proinde tempus Anni ſiderei, ſive $365^{D.}\ 6^{H.}\ 9'$, ad Tempus quo Cometa talis deſcriberet Quadrantem Orbitæ ſuæ à Perihelio, ſive Aream ſpatio POS analogam, ut Area Circuli ſive 3,14159, *&c.* ad Aream parabolicam $= \frac{4}{3} \times \surd \frac{1}{2} = \frac{2}{3} \surd 2$. Cometa igitur deſcriberet quadrantem illum Diebus $109^{D.}\ 14^{H.}\ 46'$, atq; adeo Areâ illâ Parabolicâ ut POS in centum particulas diſtributâ, ſingulis Diebus competunt particulæ 0,912280, cujus Logarithmus nempe 9,960128 in perpetuum uſum ſervandus. Tempora autem quibus Cometæ in diſtantiis majoribus vel minoribus Quadrantes ſimiles deſcriberent, ſunt ut Revolutiones in Circulis, hoc eſt in ſeſquiplicata ratione Diſtantiarum; adeoq; Areæ diurnæ in partibus centeſimis Quadrantum æſtimatæ (quas quidem Centeſimas medii Motus menſuras, inſtar graduum Anomaliæ, ponimus) ſunt in ſingulis in ſubſeſquialtera ratione Diſtantiarum à Sole in Perihelio.

His neceſſario præmiſſis proponatur alicujus è Cometis noſtris Locum viſum ad datum Tempus ſupputare. Ac primum habeatur in promptu Locus Solis ab Æquinoctio, cum Logarithmo Diſtantiæ ejuſdem a Terra. 2°. Capiatur intervallum Temporis inter Tempus datum & Tempus Perihelii è columnâ octavâ Elementorum ſumptum, in Diebus & Diei partibus decimalibus. Hujus numeri Logarithmo addatur Logarithmus conſtans 9,960128 ac complementum Arithmeticum ſeſquialterius Logarithmi Diſtantiæ Periheliæ à Sole Summa erit Logarithmus medii Motus Cometæ in prima Columna *Tabulæ Generalis* quærendi. Idem autem compendioſius habetur ope Logarithmi medii Motus Diurni in Columnâ ſeptimâ, Logarithmo Temporis ſimpliciter addendi. 3°. Cum Motu medio capiatur in Tabulâ correſpondens angulus à Perihelio, & Logarithmus pro Diſtantia à Sole: Ac in Cometis Directis adde, in Retrogradis ſubduc, ſi fuerit Tempus poſt Perihelion; vel in Directis ſubduc & in Retrogradis adde, ſi fuerit ante Perihelion, angulum ſic inventum a loco vel ad locum Perihelii in columnâ quartâ; & habebitur Locus Cometæ in Orbe proprio. Ac ad Logarithmum pro Diſtantia ibidem inventum addatur Logarithmus Diſtantiæ Periheliæ (Colum. VI.) ſumma erit Logarithmus Diſtantiæ veræ Cometæ à Sole. 4°. Cum loco Cometæ in Orbita, dato loco Nodi (Colum. II.) capiatur Diſtantia Cometæ à Nodo; ac datâ Inclinatione Plani (Colum. III.) dabuntur, notiſſimis *Trigonometriæ* præceptis, locus Cometæ ad Eclipticam reductus, cum Inclinatione ſive Latitudine Heliocentricâ, ac Diſtantiæ curtatæ Logarithmus. 5°. Ex his datis, iiſdem omnino Regulis quibus loca Planetarum, ex dato loco & Diſtantiâ Solis obtinebitur Cometæ locus viſus ſeu Geocentricus, cum Latitudine viſâ. Hoc autem Exemplo uno vel altero forſan operæ pretium erit illuſtrare.

EXEMPL. I. Quæritur Locus Cometæ Anni 166$\frac{4}{5}$ *Martii* 1°. 7^{h}. 00′. P. M. Hoc eſt 96^{d}. 19^{h}. 8′. poſt Perihelion ejus *Novemb.* 24°. 11^{h}. 52′. celebratum.

Log. diſt. Perihel.	0.011044	*Perihel.* ♌	10. 41. 25	*Log pro diſt.*	0. 255369
Log. Seſquialt.	0.016566	*Ang. Correſp.*	83. 38. 05—	*Log. Perihel.*	0. 011044
Comp. Arith.	9. 983434	*Com. in Orb.* ♉	17. 3. 20	*Co-ſin. Incl.*	9. 990754
	9. 960128	☊ ♊	21. 14. 00.	*Log. diſt. Curt.*	0. 257167
Log. Temp.	1. 985862	*Com. à Nodo*	34. 10. 40.	*Log. diſt.* ☉	9. 997939
Log. Med. Mot.	1. 929424	*Red. ad Eclip.*	32. 19. 05.	☉ ♓	21. 44. 33
Medius Motus	85,001	*Com. Helioc.* ♉	18. 54. 55.	*Com. Viſus* ♈	29. 18. 20
		Inclin. Bor.	11. 46. 50.	*Lat. Viſa*	8. 36. 15. *Bor.*

EXEMPL. II. Quæritur Locus Cometæ Anni 1683 *Julii* 23°. 13^{h}. 35′. P. M. *Londini.* Vel 13^{h}. 40′. Temp. æquat. Hoc eſt 21^{d}. 10^{h}. 50.′ poſt Perihelion.

Log. diſt. Perihel.	9. 748343	*Perihel.* ♊	25. 29. 30	*Log. pro diſt.*	0. 111336
Log. Seſquialt.	9. 622514	*Ang. Correſp.*	56. 47. 20	*Log. Perihel.*	9. 748343
Comp. Arith.	0. 377486	*Com. in Orb.* ♈	28. 42. 10	*Co-ſin Inclin.*	9. 913187
	9. 960128	☋ ♓	23. 23. 00	*Log. diſt. Curt.*	9. 772866
Log. Temp.	1. 310723	*Com. à* ☋	35. 19. 10	*Log. diſt.* ☉	0. 006062
Log. Med. Mot.	1. 648337	*Red. ad Eclip.*	4. 48. 30	☉ *Locus* ♌	10. 39. 14
Medius Motus	44, 498	*Com. Helioc.* ♓	28. 11. 30	*Com. Viſus* ♋	5. 11. 28
		Inclin. Bor.	35. 2. 00	*Lat. Bor.*	28. 52. 13

Horâ autem primi Exempli, ſeorſim obſervatum eſt ab *Auzoutio* & *P. Gottignio* Cometam applicari ad Stellam ſecundam *Arietis*; ita ut novem vel decem minutis illâ borealior repertus ſit, quoad longitudinem vero quaſi conjunctus. In ſecundo autem Exemplo ipſe, in viciniâ *Londini*, Inſtrumentis quibus olim Stellas Auſtrales obſervaveram, Cometæ locum deprehendi ♋. 5°. 11′$\frac{1}{2}$, cum Latitudine Boreali 28°. 51′; conſentiente ad amuſſim obſervatione *Grenovicenſi* eodem pene momento factâ.

Cometa autem Anni 1680, qui pene Solem attigit, (non enim triente ſemidiametri corporis Solaris à ſuperficie ejus diſtabat in Perihelio) cum Latus rectum exiguum admodum ſit, Tabulâ Generali haud coerceri potuit, ob immanem Motus medii velocitatem : Præſtat itaque in hoc Cometa, poſtquam inventus fuerit Motus ejus medius, ex eodem, ope præcedentis æquationis $z^3 + 3z = \frac{4}{100}$ *Mot. med.* Tangentem dimidii anguli à Perihelio elicere, una cum Logarithmo pro diſtantia à Sole. Quibus datis iiſdem omnino regulis ac in cæteris procedendum eſt.

Ad hunc itaque modum Aſtronomico Lectori examinare licet numeros à me poſitos, quos ſummâ curâ ex obſervationibus quæ ſuppetebant exantlavi; neque enim, antequam probe ad incudem redacti fuerant, ac multo ſtudio quantum fieri poſſit politi, in publicum prodiere. Monendus autem eſt Lector, quinque priores ordine Cometas, quorum tertius & quartus eſt à *Petro Apiano* obſervatus; quintus vero à *Paulo Fabricio*, uti & decimus à *Michaele Mæſtlino* Anno 1596 conſpectus, non eundem certitudinis gradum cum reliquis præ ſe ferre : neque enim debitis organis nec curâ ad hoc requiſitâ obſervationes ipſæ peractæ ſunt; adeoque inter ſe diſſidentes nullo modo cum computo regulari conciliari poſſunt. Cometam Anni 1684 unus vidit Cl. *Blanchinus* Obſervator *Romanus*: ultimum vero Anni ſc. 1698 *Pariſienſes* ſoli conſpexerunt, ejuſque curſum inſolito modo deſignarunt. Obſcurus hic admodum, etiamſi velox ac Terris ſatis vicinus, noſtros ſane Oculos alioquin non incurioſos effugit. Inſignes autem duos hac noſtra ætate Cometas, alterum Anno 1689 Menſe *Novembri* ortum, alterum Menſe *Februario* Anni 1702, Catalogo ſubjungere non licuit, propter defectum Obſervationum. Etenim verſus Mundi plagas Auſtrales curſum dirigentes, ac in *Europâ* vix conſpicui, contemplatores non habuere negotio pares.

Collatis autem inter ſe horum Cometarum motuum Elementis, videre eſt nullo ordine diſpoſitos eſſe Orbitas ; neque ipſos, Planetarum more, Zodiaco comprehendi poſſe, quaquaverſum tam Retrograde quam Directe indifferenter latos : unde manifeſtum eſt eos Motu Vorticali nullo modo circumagi. Quinetiam diſtantiæ Periheliæ nunc majores nunc minores reperiuntur ; unde pronum eſt ſuſpicari etiam multo plures eſſe Cometas, qui in partibus à Sole remotioribus, obſcuri caudâque deſtituti, adeoque nobis inconſpicui, prælabi poſſunt.

Hactenus Cometarum Orbes conſideravimus ut perfectè Parabolicos ; quo ſuppoſito conſequeretur Cometas, Vi Centripeta verſus Solem impulſos, à ſpatiis infinite diſtantibus deſcendere, caſuque ſuo velocitatem tantam acquirere, ut iterum in ſpatia Mundi remotiſſima ſeſe abdere poſſint, perpetuo niſu ſurſum tendentes, nec ad Solem unquam reverſuri. Cum autem ſatis frequentes ſint Cometarum adventus ; ac eorum nullus reperiatur motu ferri Hyperbolico,

bolico, ſeu velociore quam cadendo ad Solem acquirere debeat, credibile eſt potius in Orbibus valde Eccentricis eos revolvi circa Solem, ac poſt longiſſimas Periodos reverti. Sic enim Numerus eorum præfinitus eſſet, ac fortaſſe non uſque adeo magnus. Spatia autem inter Solem Fixaſque tanta ſunt, ut Cometæ revolventi cum Periodo quantumvis longâ ſatis loci ſit. Latus autem rectum Ellipſis eſt ad Latus rectum Parabolæ eandem Periheliam diſtantiam habentis, ut diſtantia Aphelia in Ellipſi eſt ad Axem totum Ellipſeos; Velocitates autem ſunt in dimidiata ratione Laterum rectorum: quapropter in Orbibus valde Eccentricis ratio hæc accedit proximè ad rationem æqualitatis. Tantilla autem differentia quæ intercedit, ratione majoris in Parabola velocitatis, facillime in ſitu Orbis determinando compenſatur. Tabulæ itaq; Elementorum Motuum uſus præcipuus eſt, atque etiam propter quem illam conſtruere operæ pretium duxi, ut, ſiquando novus Cometa emerſerit, poſſimus collatis Elementis dignoſcere an poterit eſſe aliquis ex antiquis, necne; ac proinde Periodum Orbitæque Axem determinare, reditumque prædicere.

De Motu Cometarum in Orbibus Ellipticis.

Confectâ jam ante plures annos Elementorum Tabulâ præmiſſâ, ſtatim ſubodoratus ſum, ex ſitu conſimili Planorum & Periheliorum, unum eundemq; fuiſſe Cometam tertia vice in Orbe Elliptico revolutum, qui annis 1531, 1607, & 1682 conſpecti ſunt. Verum cum Periodorum & Inclinationum diverſitas aliquanto nimia huic noſtræ ſuſpicioni adverſari videretur, ac priorum *Apiani* & *Kepleri* obſervata parum accurata, ne dicam rudia, tam ſubtili negotio enucleando vix paria eſſe judicarem; contentus eram, cum hanc Synopſin prima vice, anno ſc. 1705, ederem, conceptus hos meos, aliqua ſaltem probabilitatis ſpecie fultos, indicaſſe; Poſteroſque ut reditum ejus, juxta annum 1758 expectandum, ſedulò præſtolarentur monuiſſe. Poſtea vero quam, evolutis Cometarum antiquiorum Catalogis, Tres alios deprehenderam, eodem plane ordine, paribuſq; temporis intervallis, dictos Tres præceſſiſſe (nempe anno 1305 circa *Paſcham*, anno 1380 ſed incerto Menſe, ac deinde anno 1456 Menſe *Junio*) priorem ſententiam paulo audentius tueri cœpi: Et compos factus methodi quâ calculus in Orbe Elliptico quantumvis Eccentrico accuratè & perfacile abſolvitur, loco Orbis Parabolici Cometæ anni 1682 inter Elementa deſcripti, Ellipſi Magnitudine & Specie datæ, in cujus Foco Sol, ad Eclipticæ planum Terræq; in eâ motum ita Poſitionem coaptare aggreſſus ſum, ut omnia D^{ni} *Flamſtedii* de

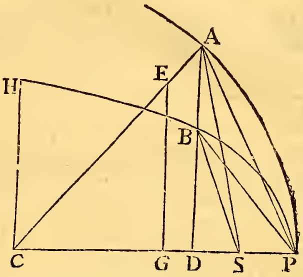
hoc

hoc Cometâ obſervata, prægrandi ac peraccurato Sextante capta, & à Refractionibus debitè purgata, Theoriam noſtram computi rigoroſi examini ſubjectam abunde comprobarent.

Manifeſtum autem eſt duas hujus Cometæ Periodos CLI annis proximè peragi, ſingulas vero alternatim majores & minores provenire LXXVI & LXXV annorum circiter: Proinde ſumptâ Periodo mediâ ſeptuaginta quinq; cum ſemiſſe annorum (per *Prop.* 15. Lib. I. *Princip. Philoſ. Natur.*) fit ſemiaxis major Orbis Cometæ ad mediam Terræ à Sole diſtantiam, ut $75\frac{1}{2}^{\frac{2}{3}}$, hoc eſt ut 17,8635 ad 1. Inventâ autem diſtantiâ Periheliâ obſervationibus maxime congruâ partium iſtarum 0,5825, fit Eccentricitas Orbis 17,2810, unde ſemiaxis minor 4,5246. Hujus Ellipſeos Planum ad Planum Eclipticæ inclinatum reperi angulo 17°. 42′, Nodumque habere aſcendentem ad ♉ 20°. 48′; Perihelion vero Cometæ, in hoc Plano Retrogradi, ad ♒ 1°. 36′, ſive 109°. 12′ poſt Nodum Aſcend. Et Tempus æquatum Perihelii *Septemb.* 4°. $21^{h.}$ 22′. Motus autem medius ejus diurnus pars erat $\frac{1}{75\frac{1}{2}}$ Motus medii diurni Solis, ſive 0°. 0′. 47″ quam proximè; & exiſtente radio 1, arcûs 0′. 47″ longitudo, hoc eſt 0,000227843, eſt ut Motus diurnus Cometæ in extremitate Axis minoris, & eam habet rationem ad circumferentiam Circuli, quam habet dies unus ad Tempus Periodicum, quamq; habet Area Elliptica, quotidie radiis ad Solem ductis intercepta, ad Aream totius Ellipſeos; quamque proinde commodè pro menſurâ Motûs medii Cometæ uſurpari poterit. Hujus itaq; Logarithmus 6,357636, Logarithmo Temporis à Perihelio additus, dat Logarithmum medii Motûs ad datum Tempus, ſive rationis Areæ, inter locum Cometæ in Orbe ſuo ac Perihelion radio ad Solem ducto abſciſſæ, ad Aream totam Ellipſeos.

Componitur autem hæc Area è duabus, nempe ex Areâ Trianguli cujus Baſis eſt diſtantia Perihelia Cometæ & altitudo ordinatim applicata, & ex Areâ Segmenti chordâ de vertice Ellipſis ad Cometam ductâ intercepti: Id quod fortaſſe nonnullis utile erit Schemate plenius exponi.

Orbis Cometæ Elliptici PBH ſit CP ſemiaxis major, CH ſemiaxis minor, PA circulus Ellipſi circumſcriptus, & S Focus; unde PS diſtantia Perihelia & CS Eccentricitas Orbis. Sit Cometæ locus in B, à quo ducatur ordinatim applicata ad Axem BD, quæ producta occurrat circulo in A, ac jungantur rectæ AP, AS; BP, BS; & in ductâ CA fiat CE ipſi CS æqualis, & ſit ad axem normalis EG. Jam conſtat ex probatiſſimis *Kepleri* inventis, aream PSAP eſſe ad aream totam Circuli, pariterq; PSBP ad aream totam Ellipſeos, ut Tempus quo deſcriberet Cometa arcum BP ad Tempus Periodicum quo revolutionem integram in Ellipſi perageret. Area autem PSAP conflatur è Segmento Circulari APA & Triangulo PSA, cujus quidem Trianguli duplum eſt PS × AD Sinum anguli ACP; Segmenti vero duplum eſt exceſſus arcûs AP ſupra Sinum AD in radium CP ductus. Ponatur Radius $CP = 1$, & dicatur $PS = b$, & datâ areâ qualibet $PASP = a$, quæratur $AD = z$ Sinus Anomaliæ Eccentri ACP. Eſt autem zb duplum Trianguli PSA; ac juxta Theorema notiſſimum, arcus Circularis $AP = z + \frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$, *&c.* Unde dupla area Segmenti PAP fit $\frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$, *&c.* Ac proinde $2a = bz + \frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$, *&c.* Extractâ autem hujus æquationis Radice z, datur Anomalia Eccentri ACP, ejuſq; Sinus Verſus PD: ac ſi fiat ut CP ad CS ita PD ad SG, $PG = SG + PS$ erit ipſi BS diſtantiæ Cometæ à Sole æqualis. Denique fiat ut CP ad CH ita AD ad BD, qui ſinus erit Anomaliæ veræ ſive anguli PSB ad radium BS.



Extractio autem Radicis ex hac æquatione minimè obvia eſt, nec generaliter in omni caſu niſi tentando efficienda. Quocirca ad levandam Calculi moleſtiam, Tabulam ſequentem, ejuſdem pene formæ cum Tabula Generali pro Motu Parabolico, juxta jam expoſita principia concinnavi; cujus ope Cometæ anni 1682 Obſervata omnia *Grenovicenſia* ſatis apte repræſentantur.

Verum in hac Tabulâ condendâ uſus ſum artificio quale *Keplerus* in Tabulis ſuis *Rudolphinis* adhibet. Ponendo enim angulum Anomaliæ Eccentri ACP æquabiliter augeri, in ſecundâ Columnâ ſub titulo medii Motus habetur dupla Area Spatii mixtilinei PASP, compoſita ex differentiâ arcûs AP & Sinûs AD in Radium $CP = 1$, & ex rectangulo PS × AD ſimul ſumptis, capiendo ſcilicet PS ad 1 in ratione quam habet ſemiaxis major 17,8635 ad 0,5825 diſtantiam Periheliam; unde PS fit 0,0326085, ejuſq; Logarithmus 8,513331. Columna Quarta exhibet angulum PSB Anomaliæ veræ à Perihelio; & Sexta Logarithmum rationis quam habet SP ad diſtantiam SB reſpectivè. Cæteræ Columnæ differentias dant priorum, unde paratius ſumantur partes proportionales. Hæc autem Tabula non niſi in Ellipſibus huic noſtræ ſimilibus locum habet.

TABULA MOTUS COMETÆ

ANNIS MDXXXI, MDCVII & MDCLXXXII *VISI.*

Anom. Eccentri.	*Medius Motus Cometæ.*	*Differentia Medii Motus.*	*Angulus à Perihelio.*	*Differentia Angulorum.*	*Logarithmus pro diſtantiâ à Sole.*	*Differentia Logarithm.*
° ′			° ′ ″	° ′ ″		
0 0	0,00000000		0 0 0		0,000000	
0 12	0,00011383	11383	1 33 12	1 33 12	0,000078	78
24	0,00022770	11387	3 6 23	1 33 11	0,000314	236
36	0,00034166	11396	4 39 29	1 33 6	0,000706	392
48	0,00045574	11408	6 12 30	1 33 1	0,001254	548
1 0	0,00056998	11424	7 45 21	1 32 51	0,001958	704
12	0,00068443	11445	9 18 3	1 32 42	0,002817	859
24	0,00079913	11470	10 50 34	1 32 31	0,003830	1013
36	0,00091411	11498	12 22 50	1 32 16	0,004994	1164
48	0,00102943	11532	13 54 50	1 32 0	0,006311	1317
2 6	0,00114511	11568	15 26 33	1 31 43	0,007778	1467
12	0,00126120	11609	16 57 55	1 31 22	0,009396	1618
24	0,00137775	11655	18 28 59	1 31 4	0,011156	1760
36	0,00149479	11704	19 59 39	1 30 40	0,013064	1908
48	0,00161237	11758	21 29 53	1 30 14	0,015115	2051
3 0	0,00173052	11815	22 59 40	1 29 47	0,017307	2192
12	0,00184929	11877	24 29 0	1 29 20	0,019639	2332
24	0,00196871	11942	25 57 50	1 28 50	0,022105	2466
36	0,00208885	12014	27 26 9	1 28 19	0,023708	2603
48	0,00220972	12087	28 53 55	1 27 46	0,027441	2733
4 0	0,00233135	12163	30 21 9	1 27 14	0,030303	2862
12	0,00245383	12248	31 47 46	1 26 37	0,033292	2989
24	0,00257715	12332	33 13 49	1 26 3	0,036403	3111
36	0,00270139	12424	34 39 13	1 25 24	0,039636	3233
48	0,00282658	12519	36 3 58	1 24 45	0,042987	3351
5 0	0,00295274	12616	37 28 4	1 24 6	0,046452	3465
12	0,00307994	12720	38 51 29	1 23 25	0,050029	3577
24	0,00320820	12826	40 14 13	1 22 44	0,053715	3686
36	0,00333758	12938	41 36 14	1 22 1	0,057508	3793
48	0,00346809	13051	42 57 30	1 21 16	0,061405	3897
6 0	0,00359981	13172	44 18 3	1 20 33	0,065400	3995

TABULA MOTUS COMETÆ

ANNIS MDXXXI, MDCVII & MDCLXXXII *VISI.*

Anom. Eccentri.	*Medius Motus Cometæ.*	*Differentia medii Motus.*	*Angulus à Perihelio.*	*Differentia Angulorum.*	*Logarithmus pro diſtantiâ à Sole.*	*Differentia Logarithm.*
° ′			° ′ ″	° ′ ″		
6 0	0,00359981		44 18 3		0,065400	
12	0,00373276	13295	45 37 51	1 19 48	0,069493	4093
24	0,00386698	13422	46 56 54	1 19 3	0,073676	4183
36	0,00400251	13553	48 15 10	1 18 16	0,077952	4276
48	0,00413940	13689	49 32 41	1 17 31	0,082315	4363
7 0	0,00427769	13829	50 49 24	1 16 43	0,086762	4447
12	0,00441741	13972	52 5 20	1 15 56	0,091292	4530
24	0,00455861	14120	53 20 28	1 15 8	0,095898	4606
36	0,00470132	14271	54 34 48	1 14 20	0,100580	4682
48	0,00484560	14427	55 48 20	1 13 32	0,105333	4753
8 0	0,00499147	14587	57 1 3	1 12 43	0,110157	4824
12	0,00513898	14751	58 12 58	1 11 55	0,115046	4889
24	0,00528819	14921	59 24 5	1 11 7	0,119999	4953
36	0,00543912	15093	60 34 24	1 10 19	0,125013	5014
48	0,00559179	15267	61 43 53	1 9 29	0,130083	5070
9 0	0,00574626	15447	62 52 34	1 8 41	0,135211	5128
12	0,00590259	15633	64 0 27	1 7 53	0,140389	5178
24	0,00606080	15821	65 7 30	1 7 3	0,145618	5229
36	0,00622095	16015	66 13 46	1 6 16	0,150894	5276
48	0,00638305	16210	67 19 13	1 5 27	0,156216	5322
10 0	0,00654715	16410	68 23 51	1 4 38	0,161579	5363
12	0,00671331	16616	69 27 42	1 3 51	0,166982	5403
24	0,00688156	16825	70 30 45	1 3 3	0,172422	5440
36	0,00705193	17037	71 33 2	1 2 17	0,177898	5476
48	0,00722447	17254	72 34 32	1 1 30	0,183407	5509
11 0	0,00739921	17474	73 35 15	1 0 43	0,188946	5539
12	0,00757621	17700	74 35 11	0 59 56	0,194514	5568
24	0,00775550	17929	75 34 22	0 59 11	0,200109	5595
36	0,00793712	18162	76 32 46	0 58 24	0,205728	5619
48	0,00812111	18399	77 30 27	0 57 41	0,211371	5643
12 0	0,00830751	18640	78 27 22	0 56 55	0,217034	5663

Hujus etiam Calculi cape Exemplum. Anno 1682 *Auguſti* 30^{mo} 7^{h}. 42′ Temp. æquat. *Grenovici*, obſervatus eſt, repetitis & limitatis Obſervationibus, Locus Cometæ, deductâ refractione, in ♎ 15°. 34′. 42″, cum Lat. Boreâ 17°. 24′. 56″. Videamus jam quali ſucceſſu reſpondeat computus noſter.

Tempus propoſitum Perihelion Cometæ præceſſit 5^{d}. 13^{h}. 40′, ſive in partibus decimalibus, 5^{d}, 5694. Hujus numeri Logarithmus 0,745811 Logarithmo Motus diurni 6,357636 additus, dat Log. numeri 0,00126896 pro medio Motu Cometæ ante Perihelion. In Tabulâ invenio, ad 2°. 12′ Anomaliæ Eccentri, Medium Motum 0,00126120 minorem dato partibus 776, quarum 11655 augent angulum à Perihelio 1°. 31′. 4″, & Logarithmum pro diſtantiâ à Sole differentiâ 1760: Adjectâ itaq; angulo 16°. 57′. 55″, & Logarithmo 0,009396, in Tabulâ iſti medio motui competentibus, parte proportionali reſpectivè, fit angulus veri Motus à Perihelio 17°. 3′. 58″, & Log. pro diſtantiâ à Sole 0,009513, ipſius vero diſtantiæ Log. 9,774809. Ad locum Perihelii nempe ♒ 1°. 36′ adde 17°. 3′. 58″, & habebitur locus Cometæ in Orbe ♒ 18°. 39′. 58″, ad Eclipticam vero reductus ♒ 18°. 33′. 36″, cum Latitudine Heliocentricâ 17°. 41′. 14″ Boreâ; unde Diſtantiæ curtatæ Log. 9,753779. Eodem momento Sol habuit ♍ 17°. 20′. 54″, ac Log. diſtantiæ ejus à Terrâ 0,002395. Ex his datis elicitur Locus Cometæ Geocentricus ♎ 15°. 35′. 58″ cum Lat. Boreâ 17°. 24′. 11″; peccans in Longitudine 1′. 16″, in Latitudine vero non niſi 0′. 45″.

Ad hunc modum Theoriam jam expoſitam cum omnibus D^ni^ *Flamſtedii* obſervatis conferendo, ubiq; intra differentias merito contemnendas conſenſum Cœli cum motu hoc Elliptico expertus ſum; uti patet ex ſubjectâ Tabellâ.

MDCLXXXII. *Temp. Appar.*				*Cometæ Long. Obſervat.*				*Lat. Bor. Obſervat.*			*Cometæ Long. Comput.*				*Lat. Bor. Comput.*			*Differen. Longit.*			*Differen. Latit.*		
	D.	H.	′		°	′	″	°	′	″		°	′	″	°	′	″		′	″		′	″
Aug.	19	16	38	♌	18	15	5	25	49	19	♌	18	14	19	25	48	33	—	0	46	—	0	46
	20	15	38		24	47	55	26	11	50		24	48	5	26	11	40	+	0	10	—	0	10
	21	8	21		29	37	51	26	15	15		29	39	3	26	18	3	+	1	12	+	2	48
	21	16	19	♍	1	58	0				♍	1	58	23				+	0	23			
	22	8	8		6	30	8	26	4	35		6	32	10	26	6	37	+	2	2	+	2	2
	29	8	20	♎	12	35	55	18	37	27	♎	12	38	19	18	35	3	+	2	24	—	2	24
	30	7	45		15	34	42	17	24	56		15	35	58	17	24	11	+	1	16	—	0	45
Aug.	31	8	21		18	16	20					18	17	30				+	1	10			
Sept.	1	7	33		20	28	12	15	11	37		20	29	31	15	11	23	+	1	19	—	0	14
	4	7	22		25	39	36	12	22	29		25	39	34	12	22	42	—	0	2	+	0	13
	5	7	32		26	58	20	11	31	26		26	57	45	11	33	34	—	0	35	+	2	8
	8	7	16	♎	29	56	0	9	25	31	♎	29	54	40	9	26	26	—	1	20	+	0	55
	9	7	26	♏	0	41	36	8	49	2	♏	0	39	39	8	49	0	—	1	57	—	0	2

Neque

Neque ulteriore limâ Orbem hujus Cometæ expoliendum eſſe cenſui, cum differentiæ quas videmus non totæ Numerorum noſtrorum erroribus tribuendæ ſint; ſed partim ipſis Obſervationibus, partim aſſumptis Fixarum locis nondum abſolutè perfectis, præcipue vero Refractionibus aëreis prope Horizontem variis, quibus toto apparitionis ſuæ tempore implicabatur Cometa, vix unquam viſus 12 gradibus altior. Sed & differentiæ iſtæ haudquaquam majores ſunt quam quæ in Theoriis Planetarum primariorum, per tot ſecula ab Aſtronomis excultis, vulgo experimur. Utinam *Jovis* & *Saturni* Motus intra tam arctos limites coercere liceret.

Stabilito itaq; hoc Orbe, expendamus jam curſum Cometæ quem Anno 1607 ſe obſervaſſe ſcribunt *Keplerus* & *Longomontanus*, Viri ſane in Aſtronomicis graviſſimi, ſed qui deſcriptione nimis laxâ, ac noſtræ diſquiſitioni haud ſatis aptâ, contenti ſunt: Qualia autem reliquere Obſervata hic habes.

Anno 1607, *Sept.* 16. St. Vet. *Keplerus Pragæ* circa horam nonam, vel *Londini* octavam, Cometam primâ vice vidit ſub *Urſa majore*, & quantum ex ſitu inter Fixas remotiores potuit, locum ejus æſtimavit ♌ 18°. 30′, cum Lat. Bor. $35\frac{1}{2}$. Sequenti mane hora tertiâ, diſtantia à *Genu Urſæ poſteriori (ψ Bayero)* paulo minor erat diſtantiâ duarum in *Pede viciniore* (λ & μ *Urſæ*) eique ad oculum parallela, quaſi in lineâ ex *Genu Urſæ* in *Solitariam Colli (υ Bayero)*. Rectificatis Stellarum locis (quæ vitioſè deſcribuntur, neſcio quo caſu, in Abaco *Tychonico*) fit viſus Cometæ locus ♌ 21°. 49′. Lat. 36°. 12′ Boreâ. Horâ nempe *Londini* æquat. 13^{h}. 51′.

Sept. 18. 8^{h}. 30′ *Pragæ*, *Londini* 7^{h}. 20′ Temp. æquat. Viſus eſt Cometa ſtare infra Stellulam informem ſociam *Informis magnæ inter Caudas Urſæ & Leonis*, quæ tunc habuit ♍ 12°. 18′½ cum Lat. 40°. $33'\frac{1}{4}$, à quâ aberat diametro Lunæ, in lineâ quæ tendit ſecundum *Ultimam Caudæ Urſæ* per *Manum Bootis*. Cometam reponunt hæc Obſervata in ♍ 12°. 2′, cum Latitudine 40 graduum; cum nempe diſtantiæ nudo oculo æſtimatæ Lunæ diametro æquales, ſint ſaltem 40 Min.

Sept. 21. 7^{h}. 30′ *Haphniæ*, hoc eſt *Londini* 6^{h}. 30′ Temp. æquat. *Longomontanus*, per Sextantem quinque, ut ait, in radio Cubitorum, invenit Cometam diſtare à *Mediâ Caudæ Urſæ Majoris* 30°. 59′, & circa idem tempus à *Lucidâ Coronæ* 16°. 45′, Obſervationibus reiteratis. Hinc verificatis è *Catatalogo Britannico* Fixarum locis, oritur Cometæ Long. ♎ 16°. 48′, cum Lat. Boreâ 37°. 12′. Circa idem tempus obſervavit *Keplerus*, Tyrone uſus ſocio, Cometam diſtare ab *Arcturo* 6°. 5′, in recta ducente ab *Arcturo* in *præcedentem Humerum Bootis* (γ *Bayero*) unde Cometæ locus ſaltem ♎ 17°. 0′.

Sept. 25. Poſt horam primam ab Occaſu Solis *Pragæ* 6^{h}. 48′ *Londini* Temp. æquat. 5^{h}. 36′. videbatur Cometa exiguo ſuperior linea ex *Arcturo* in *Claram in Collo Serpentis* (α) diſtans ab eadem 4°. 30′. Horâ vero ſecundâ ab Occaſu Solis, ſive 7^{h}. 37′ *Pragæ*, ſatis apparebat ſuperaſſe lineam ex *Radice Colli Serpentis* (δ) in *Eductionem Colli ejus* (β) ductam. Prima Obſervatio reponit Cometam in ♏ 12°. 0′; altera ad horam ſecundam in ♏ 12°. 30′ circiter.

Sept. 27. Cometa incidit in lineam ex *Secunda in Collo Serpentis* (δ) per *Claram Colli* ductam, ſtans ſub ea *quæ ſequitur Claram* (ε) Diametro Lunæ, vel paulo plus; & linea ex Cometâ per illam ſuam vicinam incidebat medio inter *Lucidam Coronæ* & *Humerum Herculis* (β). Hæc ſignant locum Cometæ in ♏ 18°. 50′, cum Lat. 23°. 20′ Bor. *Keplerus* horam non habet, ſed adultâ nocte factam Obſervationem credibile eſt, ob viſas Stellas minores. Pone 6^{h}. 30′ *Londini* Temp. æquat.

Octob. 1. 6$^{h}\frac{1}{2}$ *Malmogiæ* in *Scania* vidit *Longomontanus* Cometam diſtantem à *Boreâ Manus Serpentarii* quoad viſum vix gradûs dimidio; erat autem tunc in recta cum *Arcturo* & *Auſtrali in eadem Manu*: Circa idem tempus, ait *Keplerus*, exiguo erat inferior lineâ *duarum Manûs*, diſtans à proximâ tertiâ parte diſtantiæ illarum. Uterq; Obſervator, neſcio quo fato, perperam deduxere locum Cometæ ex his ſuis Obſervationibus, quem alter habet ♏ 25°. 50′, cum Lat. 17°. 35′; alter ♏ 26°. 30′, cum Lat. 17°. 40′, immani diſcrepantiâ, cum in æſtimatâ diſtantiâ & ſitu Cometæ pene conveniant. Si loco diametri Lunæ ponantur 40′, (ut nudo oculo plerumq; videtur) ac ſupponatur Cometa in linea recta cum Stellis *Manûs* conſtitutus, foret 23 Min. Borealior proximâ, ac 34 Min. Occidentalior, hoc eſt in ♏ 26°. 16′, cum Lat. Bor. 17°. 40′. Sed hanc rectam præcedebat ſenſibiliter conſenſu utriuſque, adeoq; erat proximè in ♏ 26°. 0′; id quod ſatis accurate reponit Cometam in lineâ rectâ cum *Arcturo* & *Auſtrali in Manû*, ut à *Longomontano* notatum eſt.

Octob. 2. Uterq; Obſervator iiſdem in Urbibus Cometam contulerunt cum prædictis Stellis in *Manû*. *Longomontanus* Horâ 6$^{h}\frac{1}{4}$ vidit eum in cuſpide obtuſi Iſoſcelis Trianguli cum dictis Stellis, propius tamen ad earum Boream inclinabat. Conficiebat autem, quoad filarem extenſionem, rectam lineam cum *Penultima ad ortum in Coronâ* (ε) & *Boreâ in Manu*; itemque aliam rectam cum *Auſtrali Manûs* & *inferiore capite* ♏ (credo ♑). *Keplerus* circa idem tempus (horam enim non notat) vidit Cometam inter *duas Manûs* medium, infra tamen lineam illarum, paulo altior linea ex ima illarum in *Spi-*

ram Serpentis vicinam (*μ Serpentis Bayero*) Omnibus perpenſis fit Locus Cometæ ♏ 27°. 5′, cum Lat. Boreâ 16°. 40′. *Londini* 5^{h}. 12′ Temp. æquat.

Octob. 5. 8^{h}. 30′ *Pragæ*, inſtrumentulo quodam è *Tychonicis*, obſervavit *Keplerus* diſtantiam Cometæ à *Genu Ophiuchi* (*η*) 14°. 14′, & ab *Humero præcedente Herculis* (*β*) 28°. 56′. Hinc fit Cometa in ♏ 29°. 47′, cum Lat. Boreâ 14°. 2′$\frac{1}{3}$.

Octob. 6°. Eadem Horâ, diſtabat à *Genu Ophiuchi* 13°. 22′, & ab *Humero Herculis* 29°. 27′; unde Longitudo ♐ 0°. 33′$\frac{1}{2}$, & Lat. 13°. 36′$\frac{1}{2}$.

Octob. 9. 8^{h}. Hæ diſtantiæ erant 11°. 22′; & 31°. 19′; ac proinde locus Cometæ ♐ 2°. 1′, cum Lat. Boreâ 11°. 56′.

Octob. 12. 6^{h}. 30′ *Haphniæ*, Conſenſu utriuſq; Obſervatoris, erat Cometæ locus ♐ 1°. 50′, cum Lat. 9°. 45′ Bor. Sed cum hoc è filaribus tantum extenſionibus per Stellas remotiores concluſum ſit, quæ obſervandi methodus in minimis vix ſatis fida, nollem Cometæ Motum apparentem jam tum Retrogradum factum hinc adſtruere.

Octob. 16. 6^{h}. 15′ *Pragæ*, *Keplerus* ultimâ vice Cometam vidit, idq; raptim inter nubes: Stabat, *ait*, humilis admodum, in Verticali qui circiter dimidiâ Lunæ diametro occidentalior erat ipſo *Genu* (*ζ*) *Ophiuchi*, tantum infra *Genu* ut quaſi quatuor, certe plus quam tres, diſtantiæ duarum in *Manû* intereſſe viderentur. De hac obſervatione vide *Longomontanum*, ubi *Keplerum* redarguit nimis ſecurè Cometam ad Latitudinem 6°$\frac{1}{2}$*gr.* deprimentem; cum ex dicto ſitu illum non minorem habuiſſe Longitudinem quam ♐ 2°. 10′, nec Latitudinem 8 *gr.* minorem computat.

Hæc obſervata è *Kepleri* libello *de Cometis* anno 1619 *Auguſtæ Vindelicorum* edito, & ex *Appendice Aſtronomiæ Danicæ Longomontani* deſumpta (quæ tamen optaſſem majori cum ſtudio deſcripta, præſertim juxta finem apparitionis) curſum hujus Cometæ mediocriter quidem deſignant; ſatis evidenter vero commonſtrant unum eundemq; fuiſſe cum eo Anni 1682, eodem plane argumento quo *Martem*, diutius ſub Solis radiis aliquando latitantem, eundem eſſe Planetam novimus.

Etenim uterq; Cometa Retrogradus, & idem ſpecie Orbis utriq; communis vix majori Nodorum & Perihelii motu diverſus reperitur, quam qui poſt tot annos in Planetarum ſuperiorum Orbibus agnoſcitur. Cum autem inter annos 1531 & 1607 interſint Anni 76, Semiaxem ejus paulo majorem feci, nempe qui ſit ad mediam Solis diſtantiam ut $76\frac{2}{3}$ ſive 17,9422 ad 1; diſtantiamq; Periheliam proportionaliter auxi, id etiam poſtulantibus Obſervationibus, ut ſit 0,58507, cujus Logarithmus 9,767207. Nodum autem habuit

Aſcen-

Aſcendentem ad ♉ 17°. 48′. 40″, cum Inclinatione Plani ad Eclipticam 17°. 20′; Perihelion vero in ♒ 1°. 3′. 40″; & Temp. æquat. Perihelii *Octob.* 16°. 21ʰ. 44′ *Londini.* Motus etiam medius ejus diurnus fit pars ſeptuageſima ſexta diurni Solis, ſive 0,000226344, cujus Logarithmus 6,354769.

His poſitis Elementis, eâdem omnino calculi methodo quâ in præcedentibus uſus ſum, hujus Cometæ Obſervata qualia qualia cum Numeris Tabulæ noſtræ contuli; ac licet in aliquibus ex ultimis diverſitas paulo nimia reperiatur, hoc maximâ ex parte Obſervationibus ipſis parum ſibi congruis tribuendum eſſe, facile perſpiciet Candidus Lector.

M DC VII. *Temp. Æquat.*				*Cometæ Long. Obſervat.*			*Lat. Bor. Obſervat.*			*Cometæ Long. Comput.*			*Lat. Bor. Comput.*			*Differen. Longit.*		*Differen. Latit.*	
	D.	H.	′	°	′	″	°	′	″	°	′	″	°	′	″	′	″	′	″
Sept.	16	13	51	♌ 21	49	0	36	12	0	♌ 21	55	56	36	20	4	+ 6	56	+ 8	4
	18	7	20	♍ 12	2	0	40	0	0	♍ 12	3	15	39	50	0	+ 1	15	−10	0
	21	6	30	♎ 16	48	0	37	12	0	♎ 16	45	13	37	11	2	− 2	47	− 0	58
	25	5	36	♏ 12	12	0				♏ 12	8	47				− 3	13		
	27	6	30	18	50	0	23	20	0	18	44	40	23	16	0	− 5	20	− 4	0
Oct.	1	5	25	26	0	0	17	40	0	25	58	40	17	45	46	− 1	20	+ 5	46
	2	5	12	27	5	0	16	40	0	27	7	12	16	44	0	+ 2	12	+ 4	0
	5	7	15	♏ 29	47	0	14	2	20	♏ 29	39	25	14	5	35	− 7	35	+ 3	15
	6	7	15	♐ 0	33	30	13	36	30	♐ 0	14	0	13	22	55	−19	30	−13	35
	9	6	45	2	0	50	11	56	0	1	25	7	11	33	48	−34	43	−22	12
	12	5	25	1	50	0	9	45	0	2	1	17	10	4	36	+11	17	+19	36
	16	5	0	♐ 2	10	0	8	0	0	♐ 2	14	32	8	24	10	+ 4	32	+24	10

Hic obiter notandum occurrit, Nodos hujus Cometæ tres gradus præceſſiſſe eos Cometæ anni 1682, motu ſecundum ſeriem ſignorum progreſſos; dum Perihelion 32′. 20″ tantum promotum eſt. Sed hoc annorum ſpatio præceſſio Æquinoctiorum fit 1°. 2′. 30″; unde reſpectu Fixarum, receſſit Aphelion dimidio gradu, procedentibus interea Nodis 1°. 57′. In Planetis autem progrediuntur Aphelia ac Nodi recedunt, ob Vires Corporum cœleſtium Centripetas, manifeſto ſeſe Solis Viribus immiſcentes, eaſq; interturbantes, quæ alias accuratiſſimè in ſubduplicatâ ratione diſtantiarum à centro ejus reperirentur; unde corpora circa centrum illud revoluta, in Planis quieſcentibus & invariatis, gyros Ellipticos in ſeſe redeuntes perpetuo deſcriberent, per *Prop.* 14. Lib. III. *Princip. Natur. Philoſophiæ.* Verum hic Cometa motu Retrogrado fertur; unde ob eaſdem cauſas Aphelion ejus regredi, Nodiq; promoveri debent in Cœlo immobili, propter quas Planetarum Nodi regrediuntur & Aphelia procedunt.

De Motu Cometarum in Orbibus Ellipticis.

Objiciat fortaſſe nonnullus Inclinationum & Periodorum diverſitatem, eâ quæ in revolutionibus ejuſdem Planetæ obſervatur multo majorem; cum nempe una Periodus alteram pluſquam ſpatio annuo excedat, & Inclinatio Cometæ Anni 1682 totis viginti duobus minutis primis ſuperet Inclinationem motui Cometæ anni 1607 competentem. Perpendas tamen, obſecro, ea quæ ad finem Tabularum noſtrarum *Saturni* monuimus, ubi unam iſtius Planetæ Periodum aliquando tredecim diebus aliâ diuturniorem fuiſſe monſtravimus; idq; evidenter fieri Vi Gravitatis verſus *Jovis* centrum tendentis, quæ quidem Vis in paribus diſtantiis milleſima fere pars eſt Vis Solis ipſius, quâ in Orbibus ſuis retinentur Planetæ. Computo autem accuratius inſtituto, Vires *Jovis* in *Saturnum*, *ex gr.* in Conjunctione ut vocant magnâ, *Januarii* 26° anno 1683 factâ, inveniuntur ad Vim Solis in eundem *Saturnum* ut 1 ad 186; Summa igitur Virium eſt ad Vim Solis ut 187 ad 186. Sed ad eaſdem diſtantias à centro, revolventium in circulo Tempora Periodica ſunt in ſubduplicata ratione Virium quibus urgentur: Proinde auctâ Gravitate parte ſui 186ma, abbreviaretur Periodus parte 374ta circiter, hoc eſt toto Menſe in *Saturno*. Quanto magis hujuſmodi erroribus obnoxius erit hic Cometa, qui quatuor pene vicibus altius excurrit *Saturno*, cujuſq; Velocitas, parte ſui 120mâ minore aucta, poterit Orbem Ellipticum in Parabolicum immutare?

Accidit autem, currente æſtate anni 1681, Cometam anno ſequente viſum, in deſcenſu ſuo verſus Solem, *Jovi* ita conjunctum fuiſſe, & per plures menſes eidem adeo vicinum, ut toto illo tempore parte quaſi quinquageſimâ Virium quæ Solem petebant, verſus centrum *Jovis* ſimul urgeretur: Unde, juxta Gravitatis Theoriam, arcus Orbis Elliptici, quem abſente *Jove* Cometa deſcribere debuiſſet, jam flexu Hyperboliformi *Jovem* reſpiciente intortus, ſpeciem Curvæ admodum compoſitæ atq; hactenus *Geometris* intractabilis indueret; in qua Corporis moti Velocitas & directio, ab iis quæ aliàs in Ellipſi fierent, pro ratione cauſæ, diverſæ provenirent.

Hinc ratio reddi poteſt immutatæ Inclinationis: Nam cum Cometa in hoc tranſitu *Jovem* habuerit Boream verſus pene normaliter in viam ejus erectum, incurvari debuit iſta Orbis portio in eandem plagam; ac proinde Tangentibus ejus majoribus cum Angulis ad Planum Eclipticæ inclinatis, angulus Inclinationis Plani ipſius augeretur neceſſariò. Præterea Cometa diuturniori morâ in viciniâ *Jovis* hærens, dum è partibus à Sole remotioribus tardiùs eum acceſſit, ac junctis utriuſq; centri viribus urgeretur, plus Velocitatis aſcititiæ acquiſiviſſe debuit, quam in receſſu ejus à *Jove* citatiori motu ac breviori tempore facto, in contrarias partes agentibus viribus, amittere potuit: Proinde auctâ hoc exceſſû velocitate propriâ Cometæ, probabile ſit reditum ejus non niſi poſt Periodum longiorem 76 & amplius annorum, circa finem anni 1758 vel initium proximi, futurum. Sed hæc levi tantum calamo à nobis tacta, Poſterorum ſtudio penitius excutienda permittimus, poſtquam rei veritas ex eventu comprobata fuerit.

Quod Cometa anni 1531 ab *Apiano* obſervatus idem fuerit cum jam deſcripto ſatis patet ex Periodo, ex motu ejus inter Solem & Terram Retrogrado, ex ſitu Perihelii & Nodorum & ex Inclinatione à prioribus non multum diverſis: Quæ tamen omnia ſi quis accuratè definire ſuſciperet, fruſtraneam certè navaret operam, propter Obſervationes nimis imperfectas, rudi Minervâ & inſtrumento parvo Azimuthali captas, & ad oſtendendum Caudæ Cometicæ aſcenſum in partes à Sole averſas unicè deſtinatas.

Nequis tamen cauſetur quicquam huc ſpectans à nobis omiſſum, *Apiani* ipſius opus *Aſtronomicon Cæſareum*, *Carolo* V. *Cæſari* dicatum, & apud nos tandem ægrè inventum conſului, atq; inde ſequentia non alibi edita deprompſi.

Anno 1531 *Ingolſtadii* ad *Danubium* (ſub Latitudine 48°. 40′, & Longitudine 11° ½ grad. vel 46 Min. Temp. à *Londino* ad ortum) *Auguſti* 13°. veſperi, primâ vice obſervavit Cometam *Apianus* Corum verſus: Ac Stellâ clarâ *Arcturi* ipſam Occidentis plagam occupante, vel, ut aiunt, in primo Verticali conſtitutâ, Cometa altus 7°. 56′ erat 49°. 26′ Occidente Borealior. Poſterâ Nocte *Aug.* 14°, revoluto Cœlo, erat altitudo Cometæ 8°. 29′, jam 45°. 22′ verſus Boream *Aug.* 15° in eodem Cœli ſitu, Cometa 9°. 00′ altus Borealior erat 41°. 22′. *Aug.* 16°. altus 9°. 43′ erat Bor. 35°. 13′ tantum. *Aug.* 17°, in Azimuthâ 30°. 46′ ab Occidente, altus erat 10°. 14′. *Aug.* 18°, altus 10°. 39′, ab Occidente 24°. 42′. Deinde, poſt triduum nubibus obductum, *Aug.* 22, in eodem Sphæræ ſtellatæ ſitu, Cometa altus 11°. 25′ erat 7°. 34′ ab Occidente verſus Boream: Deniq; *Aug.* 23° *Arcturo* in Occidente ſito, eo Borealior erat Cometa non niſi 3°. 50′, in altitudine 11°. 26′.

Supponit autem Obſervator, pro Aſtronomiâ ſuæ ætatis, *Arcturum* tunc habuiſſe ♎ 16°. 59′, cum Lat. 31°. 30′ Bor. perperam pro ♎ 17°. 41′, cum Lat. 30°. 57′, uti ex certioribus obſervatis conſtat. Et ſubſtituto hoc ejus loco, fit Aſcenſio Recta Medii Cœli, *Arcturo Ingolſtadii* Occidentem occupante, 278°. 10′. Hinc altitudinibus à Refractione purgatis, calculo ſatis ſuperq; accurato, proveniunt loca Cometæ ut ſequitur.

MDXXXI. Ingolſt. *Temp. App.*			*Cometæ Aſc. Recta.*			*Cometæ Decl. Bor.*			*Cometæ Long. Obſervat.*			*Lat. Bor. Obſervat.*			*Longit.* Apiano.		*Lat. Bor.* Apiano.	
D.	*H.*	′	°	′	″	°	′	″	°	′	″	°	′	″	′	″	′	″
Aug. 13	8	26	151	45	45	36	49	25	♌ 20	16	0	23	30	10	♌ 19	15	23	15
14	8	22	156	17	20	35	3	50	24	41	30	23	18	45	23	39	23	2
15	8	19	160	32	50	33	11	50	♌ 29	1	0	23	1	30	24	29	22	0
16	8	15	166	43	20	30	4	30	♍ 5	36	15	22	21	40	♍ 4	32	22	1
17	8	11	170	58	40	27	42	25	10	19	40	21	47	0	9	14	21	25
18	8	7	176	19	30	24	8	50	♍ 16	37	0	20	36	15	♍ 15	30	20	12
22	7	54	190	6	30	13	27	10	♎ 3	49	0	16	20	40	♎ 1	23	16	32
23	7	50	192	53	30	11	1	20	♎ 7	25	30	15	13	40	2	51	14	31

Si hæc loca inter ſe conferantur, ſtatim manifeſta fit nimia eorum diſcrepantia, vitio Inſtrumenti quo obſervabantur proculdubio tribuenda. Sed & in deducendis locis ex Obſervatione tertiâ & duabus ultimis, graviter ab ipſo *Apiano* erratum invenies. Etiamſi vero nihil certi & accurati ex tum incertis Datis elici poterit, abunde tamen valent ad oſtendendum hunc Cometam curſum tenuiſſe curſui ejus qui anno 1682 fulſit perquam ſimilem, ac ſi Latitudini ejus tres gradus adjicias, pene eundem.

Supervacuum eſſet Numeros noſtros cum his conferre; cum prorſus impoſſibile ſit computo quovis regulari tam irregularia & inter ſe pugnantia conciliari. Si vero ponatur Periodus 75 annorum, atq; adeo Semiaxis major Ellipſeos 17,7845; Diſtantia Perihelia 0,57993; Nodus Aſcendens ♉ 15°. 30′; Inclinatio 17°. 00′, & Perihelion ♒ 1°. 12′; Tempus vero Perihelii Anno 1531 *Auguſti* 25^{d}. 19^{h}. 00′; ac medius Motus diurnus pars ſeptuageſima quinta diurni Solis, ſive 0,000229362 cujus Log. 6,360522; habebitur, ope ejuſdem Tabulæ, motûs hujus Cometæ ſupputatio, plerumq; Obſervationibus magis congrua quam ſunt ipſæ Obſervationes inter ſe.

Vides itaq; in his tribus conſenſum Elementorum omnium, miraculi ſane loco habendum ſi fuerint tres diverſi Cometæ; vel ſi non fuerint ejuſdem in Ellipſi revoluti tres ad Solem Terramq; acceſſus diverſi. Quocirca ſi ſecundum prædicta noſtra redierit iterum circa annum 1758, hoc primum ab Homine *Anglo* inventum fuiſſe non inficiabatur æqua Poſteritas.

Atq; hic eſt Cometarum quaſi *Mercurius*, arctiore Orbe ac breviore Periodo Solem ambiens, dum cæteri omnes latius expatiantur, & poſt Revolutiones longiſſimas & plus quam ſeculares, imo plurium ſeculorum, per exigua tantum intervalla hominum conſpectui ſe produnt; dum ſcilicet à vi-cino Sole illuſtrati fortiore lumine ſplendent, ſenſibileſq; exhalant Caudas, quæ non niſi Vapores tenuiſſimi ſunt è materiâ Cometicâ vi caloris agitatâ eliciti, & in æthere tantum non vacuo magnâ cum velocitate ſurſum protruſi. Sed de hac re Phyſicâ audi Celeberrimum *NEVTONVM*, ſub finem Lib. III. *Principiorum*, pro more ſuo demonſtrativè diſputantem.

Hinc fit, ut pari evidentiâ ac in hoc noſtro anni 1682, non conſtet rediiſſe aliquem alium Cometam. Verum ſi quid argumenti ex æqualitate Periodorum & ex Phænomenis ſimularibus peti poſſit, mirus ille Cometa qui anno $168\frac{0}{1}$ fulſit, unus idemq; fuit qui anno 1106, regnante apud *Anglos* Rege *Henrico* I, è Solaribus radiis primum emerſit “Die *Veneris Februarii* 16° Veſperi, & per longum poſtea tempus ſingulis diebus veſperi conſpectus eſt. Stella apparuit in Notozephyro, quæ exigua eſt viſa & obſcura, verum radius qui ab ea profluxit admodum clarus eſſe atq; ingens radius putabatur, verſus Euraquilonem fulgens”, ut habetur in *Chronico Saxonico*, à Teſte oculari ut videtur conſcripto. Hæc autem deſcriptio ſatis quadrat cum eâ Cometæ anni $168\frac{0}{1}$, tam ratione prolixæ caudæ, quam ſitus reſpectu Solis.

Alius etiam Cometa ſimilis, juxta Conſulatum *Lampadii & Oreſtis* & annum *Chriſti* 531, Imperante *Juſtiniano*, veſperi viſus eſt; de quo *Malela* Author *Chronici Antiocheni*, fortaſſis etiam Teſtis ocularis, hæc ſcribit. “Stella ingens & tremenda in Occidente comparuit, radium album ſurſum emittens, quam quod fulguris emiſſionem præ ſe ferebat *Lampadian* nonnulli vocitabant. Per Dies autem XX fulſit”. Optaſſem quidem Hiſtoricum anni tempeſtatem qua hæc conſpecta ſunt prodidiſſe; manifeſtum tamen eſt intervallum annorum inter hunc & illum anno 1106 viſum, proximè æquale fuiſſe intervallo inter annos 1106 & 1681, nempe 575 annorum circiter.

Deductâ autem aliâ Periodo huic æquali, deveniemus ad annum ante *Chriſtum* natum quadrageſimum quartum, quo poſt occiſum *Julium Cæſarem*, emerſit Cometa maxime inſignis, ab Hiſtoricis ejus temporis pene omnibus celebratus, & à *Plinio*, *Nat. Hiſt.* Lib. II. Cap. 24; ubi habentur verba ipſius *Auguſti Cæſaris* de hac re: Horum ope ad ipſiſſimum tempus, ſitumq; Phænomeni in Cœlis perducimur; quapropter ea hic recitari non pigebit. “In ipſis Ludorum meorum diebus, Sydus crinitum per ſeptem dies, in regione Cœli quæ ſub Septentrionibus, eſt conſpectum. Id oriebatur circa undecimam horam diei, clarumq; & omnibus Terris conſpicuum fuit”. Jam Ludos hos ſuos dedicavit *Auguſtus Veneri Genetrici* (nam à Deâ *Venere* prognatos ſe jactavêre *Cæſares*) & à Natalibus ſuis, die ſcil. 23° *Septembris* inchoatos per ſeptiduum continuavit; ut ex fragmento antiqui Calendarii

MDXXXI. Ingolſt. *Temp. App.*			*Cometæ Aſc. Recta.*			*Cometæ Decl. Bor.*			*Cometæ Long. Obſervat.*			*Lat. Bor. Obſervat.*			*Longit.* Apiano.		*Lat. Bor.* Apiano.	
D.	*H.*	′	°	′	″	°	′	″	°	′	″	°	′	″	°	′	°	′
Aug. 13	8	26	151	45	45	36	49	25	♌ 20	16	0	23	30	10	♌ 19	15	23	15
14	8	22	156	17	20	35	3	50	24	41	30	23	18	45	23	39	23	2
15	8	19	160	32	50	33	11	50	♌ 29	1	0	23	1	30	24	29	22	0
16	8	15	166	43	20	30	4	30	♍ 5	36	15	22	21	40	♍ 4	32	22	1
17	8	11	170	58	40	27	42	25	10	19	40	21	47	0	9	14	21	25
18	8	7	176	19	30	24	8	50	♍ 16	37	0	20	36	15	♍ 15	30	20	12
22	7	54	190	6	30	13	27	10	♎ 3	49	0	16	20	40	♎ 1	23	16	32
23	7	50	192	53	30	11	1	20	♎ 7	25	30	15	13	40	2	51	14	31

Si hæc loca inter ſe conferantur, ſtatim manifeſta fit nimia eorum diſcrepantia, vitio Inſtrumenti quo obſervabantur proculdubio tribuenda. Sed & in deducendis locis ex Obſervatione tertiâ & duabus ultimis, graviter ab ipſo *Apiano* erratum invenies. Etiamſi vero nihil certi & accurati ex tum incertis Datis elici poterit, abunde tamen valent ad oſtendendum hunc Cometam curſum tenuiſſe curſui ejus qui anno 1682 fulſit perquam ſimilem, ac ſi Latitudini ejus tres gradus adjicias, pene eundem.

Supervacuum eſſet Numeros noſtros cum his conferre; cum prorſus impoſſibile ſit computo quovis regulari tam irregularia & inter ſe pugnantia conciliari. Si vero ponatur Periodus 75 annorum, atq; adeo Semiaxis major Ellipſeos 17,7845; Diſtantia Perihelia 0,57993; Nodus Aſcendens ♉ 15°. 30′; Inclinatio 17°. 00′, & Perihelion ♒ 1°. 12′; Tempus vero Perihelii Anno 1531 *Auguſti* 25^{d}. 19^{h}. 00′; ac medius Motus diurnus pars ſeptuageſima quinta diurni Solis, ſive 0,000229362 cujus Log. 6,360522; habebitur, ope ejuſdem Tabulæ, motûs hujus Cometæ ſupputatio, plerumq; Obſervationibus magis congrua quam ſunt ipſæ Obſervationes inter ſe.

Vides itaq; in his tribus conſenſum Elementorum omnium, miraculi ſane loco habendum ſi fuerint tres diverſi Cometæ; vel ſi non fuerint ejuſdem in Ellipſi revoluti tres ad Solem Terramq; acceſſus diverſi. Quocirca ſi ſecundum prædicta noſtra redierit iterum circa annum 1758, hoc primum ab Homine *Anglo* inventum fuiſſe non inficiabitur æqua Poſteritas.

Atq; hic eſt Cometarum quaſi *Mercurius*, arctiore Orbe ac breviore Periodo Solem ambiens, dum cæteri omnes latius expatiantur, & poſt Revolutiones longiſſimas & plus quam ſeculares, imo plurium ſeculorum, per exigua tantum intervalla hominum conſpectui ſe produnt; dum ſcilicet à vi-cino Sole illuſtrati fortiore lumine ſplendent, ſenſibileſq; exhalant Caudas, quæ non niſi Vapores tenuiſſimi ſunt è materiâ Cometicâ vi caloris agitatâ eliciti, & in æthere tantum non vacuo magnâ cum velocitate ſurſum protruſi. Sed de hac re Phyſicâ audi Celeberrimum *NEVTONVM*, ſub finem Lib. III. *Principiorum*, pro more ſuo demonſtrativè diſputantem.

Hinc fit, ut pari evidentiâ ac in hoc noſtro anni 1682, non conſtet rediiſſe aliquem alium Cometam. Verum ſi quid argumenti ex æqualitate Periodorum & ex Phænomenis ſimularibus peti poſſit, mirus ille Cometa qui anno 1680 fulſit, unus idemq; fuit qui anno 1106, regnante apud *Anglos* Rege *Henrico* I, è Solaribus radiis primum emerſit “ Die *Veneris Februarii* 16° “ Veſperi, & per longum poſtea tempus ſingulis diebus veſperi conſpectus eſt. “ Stella apparuit in Notozephyro, quæ exigua eſt viſa & obſcura, verum “ radius qui ab ea profluxit admodum clarus eſſe atq; ingens radius putabatur, verſus Euraquilonem fulgens ”, ut habetur in *Chronico Saxonico*, à Teſte oculari ut videtur conſcripto. Hæc autem deſcriptio ſatis quadrat cum eâ Cometæ anni 1680, tam ratione prolixæ caudæ, quam ſitus reſpectu Solis.

Alius etiam Cometa ſimilis, juxta Conſulatum *Lampadii & Oreſtis* & annum *Chriſti* 531, Imperante *Juſtiniano*, veſperi viſus eſt; de quo *Malela* Author *Chronici Antiocheni*, fortaſſis etiam Teſtis ocularis, hæc ſcribit. “ Stella “ ingens & tremenda in Occidente comparuit, radium album ſurſum emittens, quam quod fulguris emiſſionem præ ſe ferebat *Lampadian* nonnulli “ vocitabant. Per Dies autem XX fulſit ”. Optaſſem quidem Hiſtoricum anni tempeſtatem qua hæc conſpecta ſunt prodidiſſe; manifeſtum tamen eſt intervallum annorum inter hunc & illum anno 1106 viſum, proximè æquale fuiſſe intervallo inter annos 1106 & 1681, nempe 575 annorum circiter.

Deductâ autem aliâ Periodo huic æquali, deveniemus ad annum ante *Chriſtum* natum quadrageſimum quartum, quo poſt occiſum *Julium Cæſarem*, emerſit Cometa maxime inſignis, ab Hiſtoricis ejus temporis pene omnibus celebratus, & à *Plinio*, *Nat Hiſt.* Lib. II. Cap. 24; ubi habentur verba ipſius *Auguſti Cæſaris* de hac re: Horum ope ad ipſiſſimum tempus, ſitumq; Phænomeni in Cœlis perducimur; quapropter ea hic recitari non pigebit. “ In ipſis Ludorum meorum diebus, Sydus crinitum per ſeptem dies, in “ regione Cœli quæ ſub Septentrionibus, eſt conſpectum. Id oriebatur circa “ undecimam horam diei, clarumq; & omnibus Terris conſpicuum fuit ”. Jam Ludos hos ſuos dedicavit *Auguſtus Veneri Genetrici* (nam à Deâ *Venere* prognatos ſe jactavêre *Cæſares*) & à Natalibus ſuis, die ſcil. 23° *Septembris* inchoatos per ſeptiduum continuavit; ut ex fragmento antiqui Calendarii

Romani

Romani apud *Gruterum*, pag. 135 *Nov. Edit.* colligere licet. Per hos autem ſeptem dies comparuit Cometa teſte *Cæſare*: Nihil tamen obſtat quin etiam ante & poſt dies illos conſpicuus fuerit. Quod vero dicatur viſum fuiſſe Cometam *ſub Septentrionibus*, minime intelligendum eſt quaſi in Boreâ Cœli parte ſub Polo apparuerit, ſed ſub *ſeptem Trionibus*, *i. e.* infra Stellas lucidiores *Urſæ Majoris*. *Horâ* autem *undecimâ diei* ortum fuiſſe nullo modo concipi poteſt; quapropter loco *diei* legatur *noctis*, vel omiſſâ eâ voce, uti legitur apud *Suetonium*: Sole enim prope æquinoctium autumnale tum conſtituto, hora undecima *Romana*, quâ ortus Cometa dicitur, cœpit à quartâ matutinâ noſtri computi; ita ut inter quartam & quintam, quaſi ſeſquihorâ ante Solis exortum oriri judicabatur: Præcedebat igitur Solem viginti circiter gradus, quod de principio apparitionis, vel ſaltem ſeptidui dicti, intelligi debet. Quo tempore vero ſub ſeptem Trionibus fulſit, multo citius oriebatur, ac latitudinem habuit Borealem ſat magnam, motu Retrogrado è Signo *Virginis* in *Cancrum* latus; emenſo ſcilicet ſpatio inter *Leonem* & *Urſam* intermedio.

Jam ſi retineatur ſitus Orbis Cometæ anni 1680 reſpectu Fixarum, ac ponatur Perihelion ejus anno ante Chriſtum natum 44to, circa *Septembris* diem 18^{vum}. Calculo utcunque inſtituto, ſtatim patebit curſum Cometæ, in aſcenſu ejus à Sole, ubi maximam projecit Caudam, *clarumq; erat & omnibus Terris conſpicuum ſydus*, curſui hujus ab *Auguſto Cæſare* deſcripti ſatis congruere. Proinde haudquaquam abſurdum erit ſi Cometam à *Cæſare* viſum, abſolutis tribus revolutionibus, anno 1680 nobis denuò affulſiſſe credamus; præſertim cum ad æqualia temporis intervalla, annis ſc. *Chriſti* 531 & 1106, ſimiles quoq; Cometæ apparuerint.

Ponamus itaq; Periodum ejus 575 annorum eſſe proximè. Unde fiet Semiaxis major Ellipſeos $575^{\frac{2}{3}}$ ſive 69,14785, qualium media Terræ à Sole diſtantia ſit 1. Earundem vero partium ſit diſtantia perihelia 0,006175, qualem invenimus obſervationibus maxime congruam, atq; adeo Semiaxis Orbis conjugatus 0,92410; vel poſito ſemiaxe majore $=1$, fiet diſtantia Perihelia 0,000089301 cujus Logarithmus 5,950858; & Semiaxis minor 0,0133641 ejuſq; Logarithmus 8,125939: His jactis fundamentis, Tabulam ſequentem concinnavi, ejuſdem pene formæ cum præcedente: Cum vero ob viciniam Solis non conſpici poterit hic Cometa niſi quarto die à Perihelio, inchoatur Tabula à gradu quinto Anomaliæ Eccentri: Anguli etiam numerantur ab Aphelio, & Logarithmi ſunt ipſarum rationum quas habent veræ Cometæ à Sole diſtantiæ ad mediam Solis à Terrâ diſtantiam. Porro ad decimas graduum computata eſt in priori parte, ne ſecundis differentiis ad debitam interpolationem opus ſit.

TABULA MOTUS COMETÆ

ANNIS MDCLXXX & MDCLXXXI VISI.

Anom. Eccentri.	*Medius Motus Cometæ.*	*Diff. med. Motus.*	*Angulus ab Aphelio.*	*Diff. Angulorum.*	*Diſtantiæ à Sole Logar.*	*Differentia Logar.*
° ′			° ′ ″	′ ″		
5 0	0,00011850		17 24 12		9,430205	
		693		20 12		16801
6	0,00012543		17 4 0		9,447007	
		720		19 26		16490
12	0,00013263		16 44 34		9,463497	
		747		18 44		16190
18	0,00014011		16 25 50		9,479687	
		776		18 2		15898
24	0,00014787		16 7 48		9,495585	
		804		17 24		15617
5 30	0,00015591		15 50 24		9,511202	
		834		16 47		15346
36	0,00016425		15 33 37		9,526548	
		864		16 13		15084
42	0,00017289		15 17 24		9,541632	
		893		15 39		14830
48	0,00018182		15 1 45		9,556462	
		925		15 9		14585
54	0,00019107		14 46 36		9,571047	
		955		14 38		14347
6 0	0,00020062		14 31 58		9,585394	
		988		14 11		14118
6	0,00021050		14 17 47		9,599512	
		1020		13 43		13894
12	0,00022070		14 4 4		9,613406	
		1053		13 17		13678
18	0,00023123		13 50 47		9,627084	
		1086		12 54		13469
24	0,00024209		13 37 53		9,640553	
		1121		12 29		13265
6 30	0,00025330		13 25 24		9,653818	
		1154		12 7		13068
36	0,00026484		13 13 17		9,666886	
		1190		11 46		12877
42	0,00027674		13 1 31		9,679763	
		1225		11 25		12690
48	0,00028899		12 50 6		9,692453	
		1262		11 6		12509
54	0,00030161		12 39 0		9,704962	
		1298		10 47		12333
7 0	0,00031459		12 28 13		9,717295	
		1335		10 39		12160
6	0,00032794		12 17 44		9,729455	
		1372		10 12		11995
12	0,00034166		12 7 32		9,741450	
		1411		9 55		11833
18	0,00035577		11 57 37		9,753283	
		1450		9 39		11674
24	0,00037027		11 47 58		9,764957	
		1489		9 24		11521
7 30	0,00038516		11 38 34		9,776478	
		1528		9 10		11371
36	0,00040044		11 29 24		9,787849	
		1569		8 55		11224
42	0,00041613		11 20 29		9,799073	
		1610		8 42		11082
48	0,00043223		11 11 47		9,810156	
		1651		8 28		10943
54	0,00044874		11 3 19		9,821099	
		1693		8 16		10808
8 0	0,00046567		10 55 3		9,831907	
		1735		8 4		10675
6	0,00048302		10 46 59		9,842583	
		1778		7 52		10546
12	0,00050080		10 39 7		9,853129	
		1822		7 41		10419
18	0,00051902		10 31 26		9,863548	
		1865		7 30		10297
24	0,00053767		10 23 56		9,873845	
		1910		7 20		10178
8 30	0,00055677		10 16 36		9,884023	

TABULA MOTUS COMETÆ
ANNIS MDCLXXX & MDCLXXXI *VISI.*

Anom. Eccentri	*Medius Motus Cometæ.*	*Diff. med. Motus.*	*Angulus ab Aphelio.*	*Diff. Angulorum.*	*Distantiæ à Sole Logar.*	*Differentia Logar.*
° ′				′ ″		
8 30	0,00055677		10 16 36		9,884023	
		1955		7 9		10060
36	0,00057632		10 9 27		9,894083	
		2001		7 0		9944
42	0,00059633		10 2 27		9,904027	
		2047		6 51		9832
48	0,00061680		9 55 36		9,913859	
		2093		6 41		9723
54	0,00063773		9 48 55		9,923582	
		2141		6 32		9615
9 0	0,00065914		9 42 23		9,933197	
		4424		12 39		18916
12	0,00070338		9 29 44		9,952113	
		4619		12 8		18513
24	0,00074957		9 17 36		9,970626	
		4818		11 37		18127
36	0,00079775		9 5 59		9,988753	
		5021		11 9		17756
48	0,00084797		8 54 50		0,006509	
		5228		10 42		17399
10 0	0,00090025		8 44 8		0,023908	
		5440		10 18		17058
12	0,00095465		8 33 50		0,040966	
		5657		9 54		16729
24	0,00101122		8 23 56		0,057695	
		5876		9 31		16410
36	0,00106998		8 14 25		0,074105	
		6100		9 11		16107
48	0,00113098		8 5 14		0,090212	
		6328		8 51		15812
11 0	0,00119426		7 56 23		0,106024	
		6561		8 32		15526
12	0,00125987		7 47 51		0,121550	
		6798		8 14		15253
24	0,00132785		7 39 37		0,136803	
		7038		7 57		14990
36	0,00139823		7 31 40		0,151793	
		7283		7 42		14732
48	0,00147106		7 23 58		0,166525	
		7532		7 25		14486
12 0	0,00154638		7 16 33		0,181011	
		7786		7 12		14248
12	0,00162424		7 9 21		0,195259	
		8043		6 58		14013
24	0,00170467		7 2 23		0,209272	
		8305		6 44		13791
36	0,00178772		6 55 39		0,223063	
		8571		6 32		13572
48	0,00187343		6 49 7		0,236635	
		8841		6 20		13364
13 0	0,00196184		6 42 47		0,249999	
		9114		6 9		13159
12	0,00205298		6 36 38		0,263158	
		9393		5 57		12960
24	0,00214691		6 30 41		0,276118	
		9675		5 47		12766
36	0,00224366		6 24 54		0,288884	
		9962		5 37		12581
48	0,00234328		6 19 17		0,301465	
		10252		5 28		12399
14 0	0,00244580		6 13 49		0,313864	
		10547		5 19		12222
12	0,00255127		6 8 30		0,326086	
		10846		5 9		12049
24	0,00265973		6 3 21		0,338135	
		11149		5 1		11885
36	0,00277122		5 58 19		0,350020	
		11456		4 53		11721
48	0,00288578		5 53 26		0,361741	
		11767		4 45		11562
15 0	0,00300345		5 48 41		0,373303	

Quod Plani hujus Orbis Elliptici longiſſime extenſi poſitionem attinet, Nodos eoſdem ac in Orbe Parabolico ſuperius deſcripto retinemus, nempe ad 2°. 2′ *Capricorni* & *Cancri*; cum Inclinatione ad Planum Eclipticæ 61°. 6′. 48″. Perihelion vero Cometæ, in hoc Plano ſecundum ſeriem Signorum moti, incidit in ♐ 22°. 44′. 25″, adeoq; Aphelion in ♊ 22°. 44′. 25″, ſive 9°. 17′. 35″ ante Nodum deſcendentem. Tempus æquatum Perihelii pono *Decemb.* 7°. 23^{h}. 9′ *Londini*; Anno ſcil. 1680. Motus autem medius diurnus fit $\frac{1}{575}$ diurni Solis; hoc eſt 0,0000299167 ejuſq; Logarithmus 5,475914, cui ſi addatur Logarithmus Temporis ante vel poſt Perihelion, ſtatim habebitur Motus medius ad datum momentum.

Haud abs re erit fortaſſe ſi hujus etiam calculi Exemplum apponam. Anno 1680 *Novemb.* 3. 16$^{h.}$ 47′ *Temp. æquat.* & ad Meridianum *Londini* reducto, obſervavit D. *Gottfried Kirch*, *Coburgi Saxoniæ*, Cometam, in deſcenſu verſus Solem, adhuc omni caudâ deſtitutum, ac inſtar Nebulæ albentis abſq; Nucleo, vix nudis Oculis conſpicuum; dum ſcil. fortunâ duce *Lunam* & *Martem* ei vicinum Teleſcopio circumluſtraret. Inter adjunctas autem Fixulas ſitum Phænomeni ſatis accurate deſcriptum dedit: Unde opitulante Reverendi D. *Pound* curioſâ induſtriâ, locum ejus reſpectu Eclipticæ ſatis accuratè obtinui ♌ 29°. 51′, cum Latitudine Boreâ 1°. 18′. De hac autem Obſervatione vide *Philoſoph. Tranſact.* N° 342.

Jam præceſſit hæc obſervatio Tempus Perihelii 34$^{d.}$ 6$^{h.}$ 22′, ſive in decimalibus diei 34,2653. Hujus Log. 1,534854 Logarithmo medii Motus diurni additus fit 7,010768 Logarithmus medii Motus ad datum Tempus, qui proinde ſit ,001025105. Hunc Motum medium invenio in Tabulâ inter 10°. 24′, & 10°. 36′. Anomaliæ Eccentri, & interpolatione rite inſtitutâ provenit angulus poſt Aphelion 8°. 21′. 37″, & Logarithmus diſtantiæ veræ Cometæ à Sole 0,061658. Loco Aphelii ♊ 22°. 44′. 25″ adde 8°. 21′. 37″, fiet locus Cometæ in Orbe ſuo ♋ 1°. 6′. 2″, hoc eſt 0°. 55′. 58″ ante Nodum deſcendentem: Hinc locus ejus Heliocentricus ad Eclipticam reductus erit ♋ 1°. 34′. 58″ cum 0°. 49′. 0″ Lat. Bor. & Diſtantiæ curtatæ Logarithmus 0,061614. Habuit autem Sol eodem tempore ♏ 22°. 44′. 50″, ac Log. diſtantiæ ejus à Terrâ 9,994672. E quibus datis, ſi Calculus Trigonometricus more in Planetis uſitato adhibeatur, prodibit locus Cometæ Geocentricus ♌ 29°. 51′. 22″ cum Latitudine Borea 1°. 17′. 32″, omnino prout obſervatus eſt.

Hæc autem *Kerchii* obſervatio ſane nobilis eſt, non tantum quod tredecim diebus prior ſit cæterorum omnium obſervatis; ſed quod quaſi ſola & unica ſit è multis, apud exteros de Cometâ matutino evulgatis, cui plena fides adhiberi

hiberi poſſit. Iis quidem poliendis atq; inter ſe conferendis quantum operæ impendit ſagacitas *Newtoniana*, vides apud ipſum in *Principiorum* Lib. III. quas tamen ut inter ſe ubiq; ferè nimium diſſidentes, nec debitâ curâ inſtrumentiſve idoneis captas, nos merito prætereundas cenſemus; cum Obſervata potius juxta Calculum, quam Calculus juxta Obſervata, æſtimanda videantur.

Verum ſequens Tabella curatiſſimam Motûs Cometæ veſpertini ſeriem exhibet, magna ex parte ex Obſervationibus Sextante *Grenovicenſi* prædicto habitis deductam, ac juxta reformata Fixarum loca è Catalogo *Britannico* deſumpta, quoad ejus fieri potuit, verificatam. Duæ tantum ultimæ ipſius *Newtoni* ſunt, Cometæ evaneſcentis motum ad Stellas in *Pede Perſei* artificioſè æſtimantis. Calculo autem accuratè juxta præmiſſa Elementa inſtituto, ecce conſenſum Supputatori quantumvis ſcrupuloſo abunde ſatisfacturum.

MDCLXXX. *Temp. Æquat.*				*Cometæ Long. Obſervat.*			*Lat. Bor. Obſervat.*			*Cometæ Long. Comput.*			*Lat. Bor. Comput.*			*Differen. Longit.*		*Differen. Latit.*	
	D.	*H.*	′	°	′	″	°	′	″	°	′	″	°	′	″	′	″	′	″
Nov.	3	16	47	♌ 29	51	0	1	18	0	♌ 29	51	22	1	17	32	+0	22	−0	28
Dec.	12	4	46	♑ 6	32	30	8	28	0	♑ 6	31	20	8	29	6	−1	10	+1	6
	21	6	37	♒ 5	8	12	21	42	13	♒ 5	6	14	21	44	42	−1	58	+2	29
	24	6	18	18	49	23	25	23	5	18	47	30	25	23	35	−1	53	+0	30
	26	5	21	♒ 28	24	13	27	0	52	♒ 28	21	42	27	2	1	−2	31	+1	9
	29	8	3	♓ 13	10	41	28	9	58	♓ 13	11	14	28	10	38	+0	33	+0	40
	30	8	10½	♓ 17	38	20	28	11	53	♓ 17	38	27	28	11	37	+0	7	−0	16
Jan.	3	7	50	♈ 2	53	0	27	7	48	♈ 2	52	42	27	7	48	−0	18		
1681.	5	6	1½	8	48	53	26	15	7	8	48	51	26	14	57	−0	2	−0	10
	9	7	1	18	44	4	24	11	56	18	43	51	24	12	17	−0	13	+0	21
	10	6	6	20	40	50	23	43	32	20	40	23	23	43	25	−0	27	−0	7
	13	7	9	♈ 25	59	48	22	17	28	♈ 26	0	8	22	16	32	+0	20	−0	56
	25	7	59	♉ 9	35	0	17	56	30	♉ 9	34	11	17	56	6	−0	49	−0	24
	26	6	50	10	19	0	17	40	30	10	20	14	17	40	29	+1	14		
Jan.	30	8	22	13	19	51	16	42	18	13	18	28	16	40	5	−1	23	−2	13
Feb.	2	6	35	15	13	53	16	4	1	15	11	59	16	2	7	−1	54	−1	54
	5	7	4⅓	16	59	6	15	27	3	16	59	17	15	27	0	+0	11	−0	3
Mart.	1	11	10	♉ 27	52	40	12	23	40	♉ 27	51	47	12	22	38	−0	53	−1	2
	9	8	38	♊ 0	43	4	11	45	52	♊ 0	42	43	11	45	35	−0	21	−0	17

Experiantur itaq; *Vorticum* & *Pleni abſoluti* fautores, an juxta Hypotheſes ſuas poterint hujus Cometæ, per novem integra Signa ac ſpatium pluſquam quadrimeſtre viſi, curſum repræſentare; & an alia Curva, aliave in eâ motûs Lex à noſtrâ ſenſibiliter diverſa, ſingularem Viæ ejus Curvaturam, ac Velocitates diverſimodè auctas ac minutas pari certitudine poterit exhibere.

Si

Si hoc fieri nequeat, diſcant tandem miſſis nugis Veritatis ſtudio indulgere; & cum *Regali Societate* noſtrâ *Nullius in verba* jurare.

Cæterum hic Cometa, in ea Orbitæ ſuæ parte qua verſus Solem deſcendit, ita Planetarum omnium ſemitis propinquus acceſſit, ut ſi forte tranſeuntem cuilibet è Planetis occurrere contigiſſet, fieri non potuit quin producerentur effectus valde ſenſibiles, motus quæ Cometæ maximas patiretur interturbationes. Hoc in caſu multum immutari potuit Planum Speciesq; Ellipſeos, Tempuſq; Periodicum, præſertim ex occurſu *Jovis*. In deſcenſu nupero, Via vera Cometæ hujus parvo intervallo *Saturni* & *Jovis* Orbitas infra ſe reliquit ad Auſtrum: *Veneris* & *Mercurii* ſemitis multo propius acceſſit, *Martis* vero adhuc vicinior. Dum autem per Planum Eclipticæ tranſiit, ad Nodum ſc. Auſtrinum, ita Terræ ſemitam appropinquavit, ut ſi diebus triginta uno ſerius Solem acceſſiſſet, vix ſemidiametro Solari Globum noſtrum verſus Boream reliquiſſet: Et proculdubio Vi Centripetâ ejus (quam cum magno *Newtono* Moli ſeu quantitati Materiæ in Cometa contentæ proportionalem ſupponimus) diverſitatem aliquam in ſitu & Specie Orbis Terræ, Spatiiq; annui quantitate intuliſſet. Colliſionem vero vel contactum tantorum Corporum ac tantâ vi motorum (quod quidem manifeſtum eſt minimè impoſſibile eſſe) avortat DEUS. O. M. ne pereat funditus pulcherrimus hic rerum ordo & in Chaos antiquum redigatur. Sed hæc obiter.

Cum autem pluſquam probabile ſit cæteros Cometas in Catalogo noſtro deſcriptos poſt abſolutas Periodos ſuas iterum reverſuros eſſe, unde datis temporibus Periodicis darentur etiam Orbitarum Ellipticarum Axes, ac proinde Species; ut Aſtronomis poſteris Calculi operoſi tædium pro poſſe ſublevarem, adjicere placuit Tabulam ſequentem, qua continentur Segmentorum Areæ duplæ, Sinuum Rectorum & Verſorum Logarithmi cum eorundem differentiis, ipſiq; Sinus Verſi, ad quintas graduum Anomaliæ Eccentri partes collecti. Jam ſi fiat ut Semiaxis major Ellipſeos ad diſtantiam Periheliam, ita 1 ad quartam proportionalem, & hujus quartæ Logarithmo addantur Logarithmi Sinuum rectorum in Tabulâ ſigillatim, vel eorundem differentias additione continuâ, habebuntur duplæ Areæ Triangulorum duplis Segmentis in ſecunda Columnâ inventis addendæ, pro Medio Motu ad Anomaliis Eccentri reſpectivè. Dein addantur pari modo Logarithmi Sinuum Verſorum Logarithmo Eccentricitatis datæ, ac per totam ſeriem numerorum his ſummis competentium addatur ubiq; diſtantia Perihelia, & emerget Tabula verarum Cometæ à Sole diſtantiarum. Deniq; erit in omni caſu ut diſtantia Cometæ à Sole ad Axem Orbitæ minorem, ita Sinus Anomaliæ Eccentri ad Sinum anguli ab Focum Ellipſeos.

TABULA

TABULA GENERALIS PRO EXPEDIENDO CALCULO MOTUS COMETICI IN ELLIPSIBUS.

Anom. Eccentri.		Dupla Area Segmenti.	Anom. Eccentri Sinus Logarith.	Differentia Sinuum Logar.	Anom. Eccentri Sinus Verſus Log.	Differentia Sinuum Verſor. Log.	Anom. Eccent. Sinus Verſus Naturalis.
°	′						
0	0	0,00000,000	0,000000		0,000000		0,0000000
	12	0,00000,001	7,542906		4,784784		0,0000061
	24	0,00000,006	7,843934	301028	5,386843	602059	0,0000244
	36	0,00000,019	8,020021	176087	5,739023	352180	0,0000548
	48	0,00000,045	8,144953	124932	5,988898	249875	0,0000975
1	0	0,00000,089	8,241855	96902	6,182714	193816	0,0001523
	12	0,00000,153	8,321027	79172	6,341071	158357	0,0002194
	24	0,00000,243	8,387962	66935	6,474959	133888	0,0002986
	36	0,00000,363	8,445941	57979	6,590936	115977	0 0003899
	48	0,00000,517	8,497078	51137	6,693234	102298	0,0004934
2	0	0,00000,709	8,542819	45741	6,784741	91507	0,0006092
	12	0,00000,943	8,584193	41374	6,867517	82776	0,0007371
	24	0,00001,225	8,621962	37769	6,943084	75567	0,0008772
	36	0,00001,557	8,656702	34740	7,012597	69513	0,0010294
	48	0,00001,945	8,688862	32160	7,076954	64357	0,0011939
3	0	0,00002,392	8,718800	29938	7,136868	59914	0,0013705
	12	0,00002,903	8 746801	28001	7,192912	56044	0,0015592
	24	0,00003,482	8,773101	26300	7,245555	52643	0,0017601
	36	0,00004,133	8,797894	24793	7,295187	49632	0,0019732
	48	0,00004,861	8,821342	23448	7,342133	46946	0,0021985
4	0	0,00005,670	8,843584	22242	7,386668	44535	0,0024360
	12	0,00006,563	8,864738	21154	7,429029	42361	0,0026855
	24	0,00007,546	8,884903	20165	7,469417	40388	0,0029472
	36	0,00008,622	8,904168	19265	7,508007	38590	0,0032211
	48	0,00009,796	8,922610	18442	7,544953	36946	0,0035071
5	0	0,00011,072	8.940296	17686	7,580389	35436	0,0038053
	12	0,00012,454	8,957284	16988	7,614433	34044	0,0041156
	24	0,00013,947	8,973628	16344	7,647191	32758	0,0044380
	36	0,00015,534	8,989374	15746	7,678755	31564	0,0047726
	48	0,00017,280	9,004563	15189	7,709210	30455	0,0051193
6	0	0,00019,129	9,019235	14672	7,738630	29420	0,0054781

TABULA GENERALIS PRO EXPEDIENDO CALCULO MOTUS COMETICI IN ELLIPSIBUS.

Anom. Eccentri.		*Dupla Area Segmenti.*	*Anom. Eccentri Sinus Logarith.*	*Diff. Sinuum Logar.*	*Anom. Eccentri Sinus Verſus Log.*	*Diff. Sinuum Verſor. Logar.*	*Anom. Eccent. Sinus Verſus Naturalis.*
°	'						
6	0	0,00019129	9,019235		7,738630		0,0054781
	12	0,00021106	9,033421	14186	7,767084	28454	0,0058491
	24	0,00023214	9,047154	13733	7,794633	27549	0,0062320
	36	0,00025458	9,060460	13306	7,821332	26699	0,0066272
	48	0,00027842	9,073366	12906	7,847233	25901	0,0070344
7	0	0,00030370	9,085894	12528	7,872381	25148	0,0074539
	12	0,00033047	9,098066	12172	7,896818	24437	0,0078853
	24	0,00035877	9,109901	11835	7,920584	23766	0,0083288
	36	0,00038863	9,121417	11516	7,943715	23131	0,0087844
	48	0,00042011	9,132630	11213	7,966243	22528	0,0092521
8	0	0,00045324	9,143555	10925	7,988199	21956	0,0097319
	12	0,00048806	9,154208	10653	8,009611	21412	0,0102238
	24	0,00052463	9,164600	10392	8,030505	20894	0,0107277
	36	0,00056297	9,174744	10144	8,050906	20401	0,0112436
	48	0,00060314	9,184651	9907	8,070836	19930	0,0117717
9	0	0,00064517	9,194332	9681	8,090317	19481	0,0123117
	12	0,00068910	9,203797	9465	8,109367	19050	0,0128638
	24	0,00073499	9,213055	9258	8,128006	18639	0,0134278
	36	0,00078286	9,222115	9060	8,146251	18245	0,0140039
	48	0,00083277	9,230984	8869	8,164118	17867	0,0145921
10	0	0,00088475	9,239670	8686	8,181622	17504	0,0151922
	12	0,00093884	9,248181	8511	8,198778	17156	0,0158044
	24	0,00099510	9,256523	8342	8,215599	16821	0,0164286
	36	0,00105355	9,264703	8180	8,232097	16498	0,0170646
	48	0,00111424	9,272726	8023	8,248286	16189	0,0177128
11	0	0,00117722	9,280599	7873	8,264176	15890	0,0183728
	12	0,00124252	9,288326	7727	8,279777	15601	0,0190449
	24	0,00131019	9,295913	7587	8,295101	15324	0,0197288
	36	0,00138027	9,303364	7451	8,310157	15056	0,0204247
	48	0,00145280	9,310685	7321	8,324953	14796	0,0211326
12	0	0,00152782	9,317879	7194	8,339499	14546	0,0218524

TABULA GENERALIS PRO EXPEDIENDO CALCULO MOTUS COMETICI IN ELLIPSIBUS

Anom. Eccentri.		*Dupla Area Segmenti.*	*Anom. Eccentri Sinus Logarith.*	*Diff. Sinuum Logar.*	*Anom. Eccentri Sinus Verſus Log.*	*Diff. Sinuum Verſor. Logar.*	*Anom. Eccent. Sinus Verſus Naturalis.*
°	'						
12	0	0,00152782	9,317879		8,339499		0,0218524
	12	0,00160537	9,324950	7071	8,353803	14304	0,0225841
	24	0,00168550	9,331903	6953	8,367872	14069	0,0233277
	36	0,00176824	9,338742	6839	8,381715	13842	0,0240832
	48	0,00185365	9,345469	6727	8,395338	13623	0,0248506
13	0	0,00194175	9,352088	6619	8,408747	13410	0,0256300
	12	0,00203259	9,358603	6515	8,421951	13204	0,0264211
	24	0,00212622	9,365016	6413	8,434954	13003	0,0272240
	36	0,00222267	0,371330	6314	8,447762	12808	0,0280390
	48	0,00232198	9,377549	6219	8,460382	12620	0,0288657
14	0	0,00242420	9,383675	6126	8,472819	12437	0,0297043
	12	0,00252937	9,389711	6036	8,485077	12258	0,0305546
	24	0,00263752	9,395658	5947	8,497162	12085	0,0314168
	36	0,00274871	9,401520	5862	8,509079	11917	0,0322909
	48	0,00286297	9,407299	5779	8,520832	11753	0,0331767
15	0	0,00298034	9,412996	5697	8,532425	11593	0,0340742
	12	0,00310087	9,418615	5619	8,543863	11438	0,0349835
	24	0,00322459	9,424156	5541	8,555150	11287	0,0359045
	36	0,00335154	9,429623	5467	8,566289	11139	0,0368374
	48	0,00348177	9,435016	5393	8,577285	10996	0,0377821
16	0	0,00361532	9,440338	5322	8,588141	10856	0,0387383
	12	0,00375223	9,445590	5252	8,598860	10719	0,0397062
	24	0,00389254	9,450775	5185	8,609445	10585	0,0406860
	36	0,00403629	9,455893	5118	8,619901	10456	0,0416774
	48	0,00418352	9,460946	5053	8,630229	10328	0,0426804
17	0	0,00433427	9,465935	4989	8,640434	10205	0,0436952
	12	0,00448858	9,470863	4928	8,650518	10084	0,0447216
	24	0,00464650	9,475730	4867	8,660483	9965	0,0457597
	36	0,00480806	9,480538	4808	8,670332	9849	0,0468093
	48	0,00497330	9,485289	4751	8,680069	9737	0,0478706
18	0	0,0051[illegible]7	9,489982	4693	8,689695	9626	0,0489435

TABULA PARTIUM DIEI DECIMALIUM.

Hor.	*Decimales partes.*	*Min.*	*Decimales partes.*	*Min.*	*Decimales partes.*	*Sec.*	*Decimales partes.*
1	0,04166 ··	1	,000694 ··	31	,021527 ··	1	,000011574
2	0,08333 ··	2	,001388 ··	32	,022222 ··	2	,000023148
3	0,12500	3	,002083 ··	33	,022916 ··	3	,000034722 ··
4	0,16666 ··	4	,002777 ··	34	,023611 ··	4	,000046296
5	0,20833 ··	5	,003472 ··	35	,024305 ··	5	,000057870
6	0,25000	6	,004166 ··	36	,025000	6	,000069444 ··
7	0,29166 ··	7	,004861 ··	37	,025694 ··	7	,000081019
8	0,33333 ··	8	,005555 ··	38	,026388 ··	8	,000092593
9	0,37500	9	,006250	39	,027083 ··	9	,000104166 ··
10	0,41666 ··	10	,006944 ··	40	,027777 ··	10	,000115741
11	0,45833 ··	11	,007638 ··	41	,028472 ··	20	,000231482
12	0,50000	12	,008333 ··	42	,029166 ··	30	,000347222 ··
13	0,54166 ··	13	,009027 ··	43	,029861 ··	40	,000462963
14	0,58333 ··	14	,009722 ··	44	,030555 ··	50	,000578704
15	0,62500	15	,010416 ··	45	,031250	60	,000694444 ··
16	0,66666 ··	16	,011111 ··	46	,031944 ··	*Abacus pro longitudine Arcuum Circularium ad Radium* 1.	
17	0,70833 ··	17	,011805 ··	47	,032638 ··		
18	0,75000	18	,012500	48	,033333 ··		
19	0,79166 ··	19	,013194 ··	49	,034027 ··		
20	0,83333 ··	20	,013888 ··	50	,034722 ··	*Gr.*	*Arcuum Longit.*
21	0,87500	21	,014583 ··	51	,035416 ··	1	,0174532925
22	0,91666 ··	22	,015277 ··	52	,036111 ··	2	,0349065850
23	0,95833 ··	23	,015972 ··	53	,036805 ··	3	,0523598776
24	1,00000	24	,016666 ··	54	,037500 ··	4	,0698131701
25	1,04166 ··	25	,017361 ··	55	,038194 ··	5	,0872664626
26	1,08333 ··	26	,018055 ··	56	,038888 ··	6	,1047197551
27	1,12500	27	,018750	57	,039583 ··	7	,1221730477
28	1,16666 ··	28	,019444 ··	58	,040277 ··	8	,1396263402
29	1,20833 ··	29	,020138 ··	59	,040972 ··	9	,1570796327
30	1,25000	30	,020833 ··	60	,041666 ··	10	,1745329252

Decimales Numeri hac Notâ (··) terminati continuantur in infinitum repetitione Cyphræ ultimæ.

Catalogus præcipuarum Fixarum, ad Annum MDCCXX *ineuntem.*

Stellarum Denominatio.	*Longitudo.*			*Latitudo.*				*Mag.*
	°	′	″	°	′	″		
Extrema alæ Pegaſi	♈ 5	14	50	12	35	12	B	2
Caput Andromedæ	♈ 10	23	53	25	41	1	B	2
Borea in ventre Ceti	♈ 18	1	47	20	21	19	A	3
Nodus lini Piſcium	♈ 25	27	33	9	5	10	A	3
Clara Cinguli Andromedæ	♈ 26	27	44	25	56	19	B	2
Auſtralis in Cornu Arietis. 1ma ∗ ♈.	♈ 29	16	0	7	8	58	B	4
Borea in eodem Cornu	♉ 0	3	0	8	28	16	B	3
Lucida Cathedræ Caſſiopeiæ	♉ 1	13	7	51	13	50	B	2
Lucida Arietis, ſupra verticem	♉ 3	44	18	9	57	12	B	2
In pectore Caſſiopeiæ. *Schedir.*	♉ 3	55	21	46	35	54	B	2
In flexura ad coxas Caſſiopeiæ	♉ 10	3	44	48	47	35	B	2
Pes Auſtralis Andromedæ	♉ 10	20	44	27	46	7	B	2
Lucida Mandibulæ Ceti	♉ 10	24	15	12	37	0	A	2
Genu Caſſiopeiæ	♉ 14	2	15	46	23	26	B	3
Caput Meduſæ, *Algol*	♉ 22	15	42	22	23	47	B	2
Lucida Pleiadum	♉ 26	5	8	4	0	37	B	3
Lucida in latere Perſei	♉ 28	11	4	30	5	20	B	2
Prima Hyadum, in naribus Tauri	♊ 1	52	34	5	46	22	A	3
Oculus Boreus Tauri	♊ 4	32	11	2	35	58	A	3
Oculus ejus Auſtrinus, *Aldebaran*	♊ 5	52	0	5	29	50	A	1
Orionis pes lucidus, *Rigel*	♊ 12	55	0	31	10	11	A	1
Præcedens humerus Orionis	♊ 17	2	33	16	51	30	A	2
Capella, *Hircus*	♊ 17	56	41	22	51	47	B	1
Præcedens Clararum in Columba	♊ 18	16	38	57	24	15	A	2
Prima Balthei Orionis	♊ 18	26	38	23	36	7	A	2
Cornu Boreum Tauri	♊ 18	38	56	5	21	34	B	2
Media in Cingulo Orionis	♊ 19	32	44	24	33	23	A	2
Sequens in Cingulo Orionis	♊ 20	46	45	25	20	17	A	2
In extremitate Cornu Auſtralis Tauri	♊ 20	52	55	2	14	24	A	3
Sequens clararum in Columba	♊ 22	31	5	59	15	8	A	2
Ultima Caudæ Urſæ minoris, *Polaris*	♊ 24	39	41	66	4	11	B	2
Sequens humerus Orionis	♊ 24	50	0	16	4	26	A	1
Sequens humerus Aurigæ	♊ 26	0	32	21	28	20	B	2
Præcedentis è Geminis pes prior	♊ 29	31	43	0	56	0	A	3
Sequens in eodem pede, *Calx*	♋ 1	23	10	0	51	22	A	3

Catalogus præcipuarum Fixarum, ad Annum MDCCXX *ineuntem.*

Stellarum Denominatio.	*Longitudo.*				*Latitudo.*				*Mag.*
		°	′	″	°	′	″		
In extremo pede priore Canis majoris	♋	3	17	58	41	17	47	A	2
Sequentis è Geminis Pes lucidus	♋	5	11	18	6	47	19	A	2
In Ore Canis majoris, *Sirius*	♋	10	14	0	39	32	8	A	1
In Genu ſequentis è Geminis	♋	11	4	40	2	5	27	A	3
In Gubernaculo Argûs Navis, *Canopus*	♋	11	9	0	75	51	0	A	1
In inguine ſequentis è Geminis	♋	14	36	20	0	13	7	A	3
Caput præcedentis è Geminis, *Caſtor*	♋	16	20	20	10	3	48	B	2
Inter femora Canis Majoris	♋	16	55	0	51	22	48	A	2
Caput ſequentis è Geminis, *Pollux*	♋	19	21	9	6	39	27	B	2
In ventre Canis majoris	♋	19	32	5	48	27	33	A	2
Canis minor, *Procyon*	♋	21	55	21	15	57	55	A	1
In Cauda Canis majoris	♋	25	40	27	50	37	41	A	2
Aſellus Boreus	♌	3	38	0	3	9	41	B	4
Aſellus Auſtrinus	♌	4	48	40	0	3	46	B	4
Borea præcedentium in □ Urſæ majoris	♌	11	15	0	49	40	5	B	2
Clara in Tabulato Navis Argûs	♌	14	41	24	58	21	6	A	2
Auſtrina præcedentium in □ Urſæ majoris	♌	15	29	12	45	6	16	B	2
In Capite Leonis Auſtralior	♌	16	47	16	9	41	4	B	3
Cor Hydræ	♌	23	23	0	22	24	32	A	2
Sub Tabulato Navis	♌	23	29	0	64	27	32	A	2
Trium in Collo Leonis Borea	♌	23	38	41	11	50	13	B	3
Auſtralis Colli Leonis	♌	23	59	24	4	50	20	B	3
Media & Lucida Colli Leonis	♌	25	40	5	8	47	27	B	2
Cor Leonis, *Regulus*	♌	25	56	20	0	26	38	B	1
Inferior ſequentium in □ Urſæ majoris	♌	26	31	35	47	7	26	B	2
Borea earundem	♌	27	5	40	51	39	36	B	3
Antepenultima Caudæ Draconis	♍	3	28	11	66	21	43	B	3
In Eductione Caudæ Urſæ majoris	♍	4	56	25	54	20	16	B	2
In Sectione Tabulati Navis	♍	7	17	0	55	52	30	A	2
Lucida in Lumbis Leonis	♍	7	22	21	14	19	4	B	2
Auſtralis in Clune Leonis	♍	9	30	31	9	39	50	B	3
Penultima Caudæ Urſæ majoris	♍	11	44	0	56	23	15	B	2
Auſtralis in Femore Leonis	♍	13	38	0	6	5	10	B	3
In Sectione Carinæ Argûs	♍	15	2	12	67	11	11	A	2
Cauda Leonis	♍	17	44	14	12	16	51	B	1

Lucida

Catalogus præcipuarum Fixarum, ad Annum MDCCXX *ineuntem.*

Stellarum Denominatio.	*Longitudo.*			*Latitudo.*				*Mag.*
	°	′	″	°	′	″		
Lucida in inferiore Carinâ Navis	♍ 19	17	10	72	39	32	A	2
Clara informis inter Caudas Urſæ & Leonis	♍ 20	39	22	40	7	53	B	2
Ultima Caudæ Urſæ majoris	♍ 22	59	24	54	24	0	B	2
In ancone alæ Auſtrinæ Virginis	♍ 23	11	14	0	40	47	B	3
Sectionem Carinæ Navis ſequentium Borea	♍ 24	59	30	63	42	23	A	3
Præcedens in ala Auſtrina Virginis	♎ 0	55	52	1	22	1	B	3
Sectionem Carinæ ſequentium Auſtralis	♎ 1	28	30	67	5	20	A	2
In ala Borea Virginis, *Vindemiatrix*	♎ 6	2	40	16	12	54	B	3
Secunda Alæ Auſtrinæ Virginis	♎ 6	17	11	2	48	53	B	3
Sub Cingulo Virginis in latere	♎ 7	34	54	8	38	27	B	3
In humero præcedente Bootæ	♎ 13	43	18	49	33	0	B	3
Spica Virginis	♎ 19	56	22	2	2	0	A	1
Clara inter femora Bootæ, *Arcturus*	♎ 20	18	52	30	57	0	B	1
Ad Radicem Roboris Carolini	♎ 28	5	5	72	13	6	A	2
Lucida in lumbis Centauri	♎ 28	26	56	40	7	20	A	2
Genu poſter. præced. Centauri, *Bor. Crucis*	♏ 2	51	9	47	45	51	A	2
In talo pedis ejuſdem, *Sequens Crucis*	♏ 7	46	12	48	35	3	A	2
In imo pede poſter. ſeq. Centauri, *Pes Crucis*	♏ 8	0	5	52	49	15	A	2
Lucida Coronæ Boreæ	♏ 8	20	56	44	21	17	B	2
Lanx Auſtrina Libræ	♏ 11	11	40	0	22	51	B	2
Lucida in alvo Centauri	♏ 11	38	20	39	32	0	A	2
Lanx Borea Libræ	♏ 15	27	40	8	31	45	B	2
Lucida colli Serpentis Ophiuchi	♏ 18	8	22	25	31	56	B	2
In Genu ſiniſtro priore Centauri	♏ 19	54	30	44	4	47	A	2
In pede dextro priore ejuſdem	♏ 26	1	16	42	27	48	A	1
Clarior in ſiniſtrâ manu Ophiuchi, *Ted.*	♏ 28	23	15	17	17	15	B	3
Media trium in fronte Scorpii	♏ 28	40	50	1	56	31	A	2
Auſtralis earundem	♏ 29	2	25	5	25	46	A	3
Borea frontis Scorpii	♏ 29	17	56	1	3	9	B	2
Genu præcedens Ophiuchi	♐ 5	18	55	11	25	27	B	3
Cor Scorpii, *Antares*	♐ 5	51	4	4	31	26	A	1
Caput Herculis	♐ 12	13	47	37	18	55	B	3
Genu ſequens Ophiuchi	♐ 14	4	28	7	14	12	B	3
In Culpide Trianguli Auſtralis	♐ 16	56	27	46	5	33	A	2
In Planta pedis Ophiuchi	♐ 17	30	2	1	47	38	A	3

Caput

Catalogus præcipuarum Fixarum, ad Annum MDCCXX *ineuntem.*

Stellarum Denominatio.	*Longitudo.*			*Latitudo.*				*Mag.*
	°	′	″	°	′	″		
Caput Ophiuchi	♐ 18	30	32	35	53	16	B	3
Aculeus Caudæ Scorpii	♐ 20	40	0	13	43	25	A	2
Humerus ſequens Ophiuchi	♐ 21	25	44	27	58	0	B	3
Spondylus quintus Caudæ Scorpii	♐ 21	40	16	19	36	15	A	2
Lucida in capite Draconis	♐ 24	0	35	74	58	26	B	2
In Auſtrali parte Arcus Sagittarii	♑ 1	10	33	10	59	54	A	2
Humerus ſiniſter Sagittarii	♑ 8	28	12	3	23	32	A	3
Sub Axilla Sagittarii	♑ 9	42	22	7	7	55	A	3
Lucida Lyræ	♑ 11	22	18	61	45	31	B	1
Sequens in Capite Sagittarii	♑ 12	21	44	1	29	0	B	3
Oculus Pavonis	♑ 19	53	56	36	11	0	A	2
Roſtrum Cygni	♑ 27	20	37	49	0	31	B	3
Lucida Aquilæ	♑ 27	48	24	29	19	11	B	1
Sequens è contiguis in Cornu Capricorni	♑ 29	57	21	6	58	6	B	3
Auſtralis in eodem Cornu	♒ 0	8	57	4	37	27	B	3
Ala Gruis præcedens	♒ 11	56	35	32	50	22	A	2
Ala Borea Cygni	♒ 12	22	17	64	27	14	B	3
Præcedens duarum in Cauda Capricorni	♒ 17	52	42	2	31	18	A	3
In Eductione Caudæ Gruis	♒ 18	18	53	35	22	46	A	2
Humerus præcedens Aquarii	♒ 19	29	23	8	38	43	B	3
Sequens Caudæ Capricorni	♒ 19	38	14	2	32	19	A	3
Pectus Cygni	♒ 20	57	51	57	9	20	B	3
Ala Auſtrina Cygni	♒ 23	47	52	49	26	21	B	3
Os Pegaſi	♒ 27	58	32	22	7	16	B	3
Humerus ſequens Aquarii	♒ 29	27	16	10	40	38	B	3
In ore Piſcis notii, *Fomalhaut*	♒ 29	54	0	21	4	54	A	1
Cauda Cygni	♓ 1	26	32	59	56	37	B	2
In Crure Aquarii, *Scheat*	♓ 4	58	49	8	11	17	A	3
Caput Hydri	♓ 7	59	0	64	11	0	A	2
In extremo Flumine, *Achernâr*	♓ 11	14	6	59	19	40	A	1
Clara in capite Phœnicis	♓ 11	30	27	40	34	10	A	2
In Humero Alæ Pegaſi, *Markab*	♓ 19	34	13	19	24	37	B	2
In Crure Pegaſi, *Scheat*	♓ 25	27	13	31	8	6	B	2
Borea Caudæ Ceti	♓ 27	0	0	10	0	41	A	3
Auſtralis Caudæ Ceti	♓ 28	38	2	20	46	52	A	2

LOGA

TABULA
LOGARITHMORUM
LOGISTICORUM.

TABVLA LOGARITHMORVM LOGISTICORVM.

′	0	1	2	3	4	5	6	7	8	9
″	0	60	120	180	240	300	360	420	480	540
0		17782	14771	13010	11761	10792	10000	9331	8751	8239
1	35563	17710	14735	12986	11743	10777	9988	9320	8742	8231
2	32553	17639	14699	12962	11725	10763	9976	9310	8733	8223
3	30792	17570	14664	12939	11707	10749	9964	9300	8724	8215
4	29542	17501	14629	12915	11689	10734	9952	9289	8715	8207
5	28573	17434	14594	12891	11671	10720	9940	9279	8706	8199
6	27782	17368	14559	12868	11654	10706	9928	9269	8697	8191
7	27112	17302	14525	12845	11636	10692	9916	9259	8688	8183
8	26532	17238	14491	12821	11619	10678	9905	9249	8679	8175
9	20621	17175	14457	12798	11601	10663	9893	9238	8670	8167
10	25563	17112	14424	12775	11584	10649	9881	9228	8661	8159
11	25149	17050	14390	12753	11566	10635	9869	9218	8652	8152
12	24771	16990	14357	12730	11549	10621	9858	9208	8643	8144
13	24424	16930	14325	12707	11532	10608	9846	9198	8635	8136
14	24102	16871	14292	12685	11515	10594	9834	9188	8626	8128
15	23802	16812	14260	12663	11498	10580	9823	9178	8617	8120
16	23522	16755	14228	12640	11481	10566	9811	9168	8608	8112
17	23259	16698	14196	12618	11464	10552	9800	9158	8599	8104
18	23010	16642	14165	12596	11447	10539	9788	9148	8591	8097
19	22775	16587	14133	12574	11430	10525	9777	9138	8582	8089
20	22553	16532	14102	12553	11413	10512	9765	9128	8573	8081
21	22341	16478	14071	12531	11397	10498	9754	9119	8565	8073
22	22139	16425	14040	12510	11380	10484	9742	9109	8556	8066
23	21946	16372	14010	12488	11363	10471	9731	9099	8547	8058
24	21761	16320	13979	12467	11347	10458	9720	9089	8539	8050
25	21584	16269	13949	12445	11331	10444	9708	9079	8530	8043
26	21413	16218	13919	12424	11314	10431	9697	9070	8522	8035
27	21249	16168	13890	12403	11298	10418	9686	9060	8513	8027
28	21091	16118	13860	12382	11282	10404	9675	9050	8504	8020
29	20939	16069	13831	12362	11266	10391	9664	9041	8496	8012
30	20792	16021	13802	12341	11249	10378	9652	9031	8487	8004

TABULA LOGARITHMORUM LOGISTICORUM.

′	0	1	2	3	4	5	6	7	8	9
″	0	60	120	180	240	300	360	420	480	540
30	20792	16021	13802	12341	11249	10378	9652	9031	8487	8004
31	20649	15973	13773	12320	11233	10365	9641	9021	8479	7997
32	20512	15925	13745	12300	11217	10352	9630	9012	8470	7989
33	20378	15878	13716	12279	11201	10339	9619	9002	8462	7981
34	20248	15832	13688	12259	11186	10326	9608	8992	8453	7974
35	20122	15786	13660	12239	11170	10313	9597	8983	8445	7966
36	20000	15740	13632	12218	11154	10300	9586	8973	8437	7959
37	19881	15695	13604	12198	11138	10287	9575	8964	8428	7951
38	19765	15651	13576	12178	11123	10274	9564	8954	8420	7944
39	19652	15607	13549	12159	11107	10261	9553	8945	8411	7936
40	19542	15563	13522	12139	11091	10248	9542	8935	8403	7929
41	19435	15520	13495	12119	11076	10235	9532	8926	8395	7921
42	19331	15477	13468	12099	11061	10223	9521	8917	8386	7914
43	19228	15435	13441	12080	11045	10210	9510	8907	8378	7906
44	19128	15393	13415	12061	11030	10197	9499	8898	8370	7899
45	19031	15351	13388	12041	11015	10185	9488	8888	8361	7891
46	18935	15310	13362	12022	10999	10172	9478	8879	8353	7884
47	18842	15269	13336	12003	10984	10160	9467	8870	8345	7877
48	18751	15229	13310	11984	10969	10147	9456	8861	8337	7869
49	18661	15189	13284	11965	10954	10135	9446	8851	8328	7862
50	18573	15149	13259	11946	10939	10122	9435	8842	8320	7855
51	18487	15110	13233	11927	10924	10110	9425	8833	8312	7847
52	18403	15071	13208	11908	10909	10098	9414	8824	8304	7840
53	18320	15032	13183	11889	10894	10085	9404	8814	8296	7832
54	18239	14994	13158	11871	10880	10073	9393	8805	8288	7825
55	18159	14956	13133	11852	10865	10061	9383	8796	8279	7818
56	18081	14918	13108	11834	10850	10049	9372	8787	8271	7811
57	18004	14881	13083	11816	10835	10036	9362	8778	8263	7803
58	17929	14844	13059	11797	10821	10024	9351	8769	8255	7796
59	17855	14808	13034	11779	10806	10012	9341	8760	8247	7789
60	17782	14771	13010	11761	10792	10000	9331	8751	8239	7782

TABVLA LOGARITHMORVM LOGISTICORVM.

′	10	11	12	13	14	15	16	17	18	19	20	21
″	600	660	720	780	840	900	960	1020	1080	1140	1200	1260
0	7782	7368	6990	5642	6320	6021	5740	5477	5229	4994	4771	4559
1	7774	7361	6984	6637	6315	6016	5736	5473	5225	4990	4768	4556
2	7767	7354	6978	6631	6310	6011	5731	5469	5221	4986	4764	4552
3	7760	7348	6972	6625	6305	6006	5727	5464	5217	4983	4760	4549
4	7753	7341	6966	6620	6300	6001	5722	5460	5213	4979	4757	4546
5	7745	7335	6960	6614	6294	5997	5718	5456	5209	4975	4753	4542
6	7738	7328	6954	6609	6289	5992	5713	5452	5205	4971	4750	4539
7	7731	7322	6948	6603	6284	5987	5709	5447	5201	4967	4746	4535
8	7724	7315	6942	6598	6279	5982	5704	5443	5197	4964	4742	4532
9	7717	7309	6936	6592	6274	5977	5700	5439	5193	4960	4739	4528
10	7710	7302	6930	6587	6269	5973	5695	5435	5189	4956	4735	4525
11	7703	7296	6924	6581	6264	5968	5691	5430	5185	4952	4732	4522
12	7696	7289	6918	6576	6259	5963	5686	5426	5181	4949	4728	4518
13	7688	7283	6912	6570	6254	5958	5682	5422	5177	4945	4724	4515
14	7681	7276	6906	6565	6248	5954	5677	5418	5173	4941	4721	4511
15	7674	7270	6900	6559	6243	5949	5673	5414	5169	4937	4717	4508
16	7667	7264	6894	6554	6238	5944	5669	5409	5165	4933	4714	4505
17	7660	7257	6888	6548	6233	5939	5664	5405	5161	4930	4710	4501
18	7653	7251	6882	6543	6228	5935	5660	5401	5157	4926	4707	4498
19	7646	7244	6877	6538	6223	5930	5655	5397	5153	4922	4703	4494
20	7639	7238	6871	6532	6218	5925	5651	5393	5149	4918	4699	4491
21	7632	7232	6865	6527	6213	5920	5646	5389	5145	4915	4696	4488
22	7625	7225	6859	6521	6208	5916	5642	5384	5141	4911	4692	4484
23	7618	7219	6853	6516	6203	5911	5637	5380	5137	4907	4689	4481
24	7611	7212	6847	6510	6198	5906	5633	5376	5133	4903	4685	4477
25	7604	7206	6841	6505	6193	5902	5629	5372	5129	4900	4682	4474
26	7597	7200	6836	6500	6188	5897	5624	5368	5125	4896	4678	4471
27	7590	7193	6830	6494	6183	5892	5620	5364	5122	4892	4675	4467
28	7583	7187	6824	6489	6178	5888	5615	5359	5118	4889	4671	4464
29	7577	7181	6818	6484	6173	5883	5611	5355	5114	4885	4668	4460
30	7570	7175	6812	6478	6168	5878	5607	5351	5110	4881	4664	4457

TABVLA LOGARITHMORVM LOGISTICORVM.

′	10	11	12	13	14	15	16	17	18	19	20	21
″	600	660	720	780	840	900	960	1020	1080	1140	1200	1260
30	7570	7175	6812	6478	6168	5878	5607	5351	5110	4881	4664	4457
31	7563	7168	6807	6473	6163	5874	5602	5347	5106	4877	4660	4454
32	7556	7162	6801	6467	6158	5869	5598	5343	5102	4874	4657	4450
33	7549	7156	6795	6462	6153	5864	5594	5339	5098	4870	4653	4447
34	7542	7149	6789	6457	6148	5860	5589	5335	5094	4866	4650	4444
35	7535	7143	6784	6451	6143	5855	5585	5331	5090	4863	4646	4440
36	7528	7137	6778	6446	6138	5850	5580	5326	5086	4859	4643	4437
37	7522	7131	6772	6441	6133	5846	5576	5322	5082	4855	4639	4434
38	7515	7124	6766	6435	6128	5841	5572	5318	5079	4852	4636	4430
39	7508	7118	6761	6430	6123	5836	5567	5314	5075	4848	4632	4427
40	7501	7112	6755	6425	6118	5832	5563	5310	5071	4844	4629	4424
41	7494	7106	6749	6420	6113	5827	5559	5306	5067	4841	4625	4420
42	7488	7100	6743	6414	6108	5823	5554	5302	5063	4837	4622	4417
43	7481	7093	6738	6409	6103	5818	5550	5298	5059	4833	4618	4414
44	7474	7087	6732	6404	6099	5813	5546	5294	5055	4830	4615	4410
45	7467	7081	6726	6398	6094	5809	5541	5290	5051	4826	4611	4407
46	7461	7075	6721	6393	6089	5804	5537	5285	5048	4822	4608	4404
47	7454	7069	6715	6388	6084	5800	5533	5281	5044	4819	4604	4400
48	7447	7063	6709	6383	6079	5795	5528	5277	5040	4815	4601	4397
49	7441	7057	6704	6377	6074	5790	5524	5273	5036	4811	4597	4394
50	7434	7050	6698	6372	6069	5786	5520	5269	5032	4808	4594	4390
51	7427	7044	6692	6367	6064	5781	5516	5265	5028	4804	4590	4387
52	7421	7038	6687	6362	6059	5777	5511	5261	5025	4800	4587	4384
53	7414	7032	6681	6357	6055	5772	5507	5257	5021	4797	4584	4380
54	7407	7026	6676	6351	6050	5768	5503	5253	5017	4793	4580	4377
55	7401	7020	6670	6346	6045	5763	5498	5249	5013	4789	4577	4374
36	7394	7014	6664	6341	6040	5758	5494	5245	5009	4786	4573	4370
57	7387	7008	6659	6336	6035	5754	5490	5241	5005	4782	4570	4367
58	7381	7002	6653	6331	6030	5749	5486	5237	5002	4778	4566	4364
59	7374	6996	6648	6325	6025	5745	5481	5233	4998	4775	4563	4361
60	7368	6990	6642	6320	6021	5740	5477	5229	4994	4771	4559	4357

TABULA LOGARITHMORUM LOGISTICORUM.

′	22	23	24	25	26	27	28	29	30	31	32	33
″	1320	1380	1440	1500	1560	1620	1680	1740	1800	1860	1920	1980
0	4357	4164	3979	3802	3632	3468	3310	3158	3010	2868	2730	2596
1	4354	4161	3976	3799	3629	3465	3307	3155	3008	2866	2728	2594
2	4351	4158	3973	3796	3626	3463	3305	3153	3005	2863	2725	2592
3	4347	4155	3970	3793	3623	3460	3302	3150	3003	2861	2723	2590
4	4344	4152	3967	3791	3621	3457	3300	3148	3001	2859	2721	2588
5	4341	4149	3964	3788	3618	3454	3297	3145	2998	2856	2719	2585
6	4338	4145	3961	3785	3615	3452	3294	3143	2996	2854	2716	2583
7	4334	4142	3958	3782	3612	3449	3292	3140	2993	2852	2714	2581
8	4331	4139	3955	3779	3610	3446	3289	3138	2991	2849	2712	2579
9	4328	4136	3952	3776	3607	3444	3287	3135	2989	2847	2710	2577
10	4325	4133	3949	3773	3604	3441	3284	3133	2986	2845	2707	2574
11	4321	4130	3946	3770	3601	3438	3282	3130	2984	2842	2705	2572
12	4318	4127	3943	3768	3598	3436	3279	3128	2981	2840	2703	2570
13	4315	4124	3940	3765	3596	3433	3276	3125	2979	2838	2701	2568
14	4311	4120	3937	3762	3593	3431	3274	3123	2977	2835	2698	2566
15	4308	4117	3934	3759	3590	3428	3271	3120	2974	2833	2696	2564
16	4305	4114	3931	3756	3587	3425	3269	3118	2972	2831	2694	2561
17	4302	4111	3928	3753	3585	3423	3266	3115	2969	2828	2692	2559
18	4298	4108	3925	3750	3582	3420	3264	3113	2967	2826	2689	2557
19	4295	4105	3922	3747	3579	3417	3261	3110	2965	2824	2687	2555
20	4292	4102	3919	3745	3576	3415	3259	3108	2962	2821	2685	2553
21	4289	4099	3917	3742	3574	3412	3256	3105	2960	2819	2683	2551
22	4285	4096	3914	3739	3571	3409	3253	3103	2958	2817	2681	2548
23	4282	4092	3911	3736	3568	3407	3251	3101	2955	2815	2678	2546
24	4279	4089	3908	3733	3565	3404	3248	3098	2953	2812	2676	2544
25	4276	4086	3905	3730	3563	3401	3246	3096	2950	2810	2674	2542
26	4273	4083	3902	3727	3560	3399	3243	3093	2948	2808	2672	2540
27	4269	4080	3899	3725	3557	3396	3241	3091	2946	2805	2669	2538
28	4266	4077	3896	3722	3555	3393	3238	3088	2943	2803	2667	2535
29	4263	4074	3893	3719	3552	3391	3236	3086	2941	2801	2665	2533
30	4260	4071	3890	3716	3549	3388	3233	3083	2939	2798	2663	2531

TABULA LOGARITHMORUM LOGISTICORUM.

′	22	23	24	25	26	27	28	29	30	31	32	33
″	1320	1380	1440	1500	1560	1620	1680	1740	1800	1860	1920	1980
30	4260	4071	3890	3716	3549	3388	3233	3083	2939	2798	2663	2531
31	4256	4068	3887	3713	3546	3386	3231	3081	2936	2796	2660	2529
32	4253	4065	3884	3710	3544	3383	3228	3078	2934	2794	2658	2527
33	4250	4062	3881	3708	3541	3380	3225	3076	2931	2792	2656	2525
34	4247	4059	3878	3705	3538	3378	3223	3073	2929	2789	2654	2522
35	4244	4055	3875	3702	3535	3375	3220	3071	2927	2787	2652	2520
36	4240	4052	3872	3699	3533	3372	3218	3069	2924	2785	2649	2518
37	4237	4049	3869	3696	3530	3370	3215	3066	2922	2782	2647	2516
38	4234	4046	3866	3693	3527	3367	3213	3064	2920	2780	2645	2514
39	4231	4043	3863	3691	3525	3365	3210	3061	2917	2778	2643	2512
40	4228	4040	3860	3688	3522	3362	3208	3059	2915	2775	2640	2510
41	4224	4037	3857	3685	3519	3359	3205	3056	2912	2773	2638	2507
42	4221	4034	3855	3682	3516	3357	3203	3054	2910	2771	2636	2505
43	4218	4031	3852	3679	3514	3354	3200	3052	2908	2769	2634	2503
44	4215	4028	3849	3677	3511	3351	3198	3049	2905	2766	2632	2501
45	4212	4025	3846	3674	3508	3349	3195	3047	2903	2764	2629	2499
46	4209	4022	3843	3671	3506	3346	3193	3044	2901	2762	2627	2497
47	4205	4019	3840	3668	3503	3344	3190	3042	2898	2760	2625	2494
48	4202	4016	3837	3665	3500	3341	3188	3039	2896	2757	2623	2492
49	4199	4013	3834	3663	3497	3338	3185	3037	2894	2755	2621	2490
50	4196	4010	3831	3660	3495	3336	3183	3034	2891	2753	2618	2488
51	4193	4007	3828	3657	3492	3333	3180	3032	2889	2750	2616	2486
52	4189	4004	3825	3654	3489	3331	3178	3030	2887	2748	2614	2484
53	4186	4001	3822	3651	3487	3328	3175	3027	2884	2746	2612	2482
54	4183	3998	3820	3649	3484	3325	3173	3025	2882	2744	2610	2480
55	4180	3995	3817	3646	3481	3323	3170	3022	2880	2741	2607	2477
56	4177	3991	3814	3643	3479	3320	3168	3020	2877	2739	2605	2475
57	4174	3988	3811	3640	3476	3318	3165	3018	2875	2737	2603	2473
58	4171	3985	3808	3637	3473	3315	3163	3015	2873	2735	2601	2471
59	4167	3982	3805	3635	3471	3313	3160	3013	2870	2732	2599	2469
60	4164	3979	3802	3632	3468	3310	3158	3010	2868	2730	2596	2467

TABVLA LOGARITHMORVM LOGISTICORVM.

′	34	35	36	37	38	39	40	41	42	43	44	45
″	2040	2100	2160	2220	2280	2340	2400	2460	2520	2580	2640	2700
0	2467	2341	2218	2099	1984	1871	1761	1654	1549	1447	1347	1249
1	2465	2339	2216	2098	1982	1869	1759	1652	1547	1445	1345	1248
2	2462	2337	2214	2096	1980	1867	1757	1650	1546	1443	1344	1246
3	2460	2335	2212	2094	1978	1865	1755	1648	1544	1442	1342	1245
4	2458	2333	2210	2092	1976	1863	1754	1647	1542	1440	1340	1243
5	2456	2331	2208	2090	1974	1862	1752	1645	1540	1438	1339	1241
6	2454	2328	2206	2088	1972	1860	1750	1643	1539	1437	1337	1240
7	2452	2326	2204	2086	1970	1858	1748	1641	1537	1435	1335	1238
8	2450	2324	2202	2084	1968	1856	1746	1640	1535	1433	1334	1237
9	2448	2322	2200	2082	1967	1854	1745	1638	1534	1432	1332	1235
10	2445	2320	2198	2080	1965	1852	1743	1636	1532	1430	1331	1233
11	2443	2318	2196	2078	1963	1850	1741	1634	1530	1428	1329	1232
12	2441	2316	2194	2076	1961	1849	1739	1633	1528	1427	1327	1230
13	2439	2314	2192	2074	1959	1847	1737	1631	1527	1425	1326	1229
14	2437	2312	2190	2072	1957	1845	1736	1629	1525	1423	1324	1227
15	2435	2310	2188	2070	1955	1843	1734	1627	1523	1422	1322	1225
16	2433	2308	2186	2068	1953	1841	1732	1626	1522	1420	1321	1224
17	2431	2306	2184	2066	1951	1839	1730	1624	1520	1418	1319	1222
18	2429	2304	2182	2064	1950	1838	1728	1622	1518	1417	1317	1221
19	2426	2302	2180	2062	1948	1836	1727	1620	1516	1415	1316	1219
20	2424	2300	2178	2061	1946	1834	1725	1619	1515	1413	1314	1217
21	2422	2298	2176	2059	1944	1832	1723	1617	1513	1412	1313	1216
22	2420	2296	2174	2057	1942	1830	1721	1615	1511	1410	1311	1214
23	2418	2294	2172	2055	1940	1828	1719	1613	1510	1408	1309	1213
24	2416	2291	2170	2053	1938	1827	1718	1612	1508	1407	1308	1211
25	2414	2289	2169	2051	1936	1825	1716	1610	1506	1405	1306	1209
26	2412	2287	2167	2049	1934	1823	1714	1608	1504	1403	1304	1208
27	2410	2285	2165	2047	1933	1821	1712	1606	1503	1402	1303	1206
28	2408	2283	2163	2045	1931	1819	1711	1605	1501	1400	1301	1205
29	2405	2281	2161	2043	1929	1817	1709	1603	1499	1398	1300	1203
30	2403	2279	2159	2041	1927	1816	1707	1601	1498	1397	1298	1201

TABULA LOGARITHMORUM LOGISTICORUM.

′	34	35	36	37	38	39	40	41	42	43	44	45
″	2040	2100	2160	2220	2280	2340	2400	2460	2520	2580	2640	2700
30	2403	2279	2159	2041	1927	1816	1707	1601	1498	1397	1298	1201
31	2401	2277	2157	2039	1925	1814	1705	1599	1496	1395	1296	1200
32	2399	2275	2155	2037	1923	1812	1703	1598	1494	1393	1295	1198
33	2397	2273	2153	2035	1921	1810	1702	1596	1493	1392	1293	1197
34	2395	2271	2151	2033	1919	1808	1700	1594	1491	1390	1291	1195
35	2393	2269	2149	2032	1918	1806	1698	1593	1489	1388	1290	1193
36	2391	2267	2147	2030	1916	1805	1696	1591	1487	1387	1288	1192
37	2389	2265	2145	2028	1914	1803	1694	1589	1486	1385	1287	1190
38	2387	2263	2143	2026	1912	1801	1693	1587	1484	1383	1285	1189
39	2384	2261	2141	2024	1910	1799	1691	1585	1482	1382	1283	1187
40	2382	2259	2139	2022	1908	1797	1689	1584	1481	1380	1282	1186
41	2380	2257	2137	2020	1906	1795	1687	1582	1479	1378	1280	1184
42	2378	2255	2135	2018	1904	1794	1686	1580	1477	1377	1278	1182
43	2376	2253	2133	2016	1903	1792	1684	1578	1476	1375	1277	1181
44	2374	2251	2131	2014	1901	1790	1682	1577	1474	1373	1275	1179
45	2372	2249	2129	2012	1899	1788	1680	1575	1472	1372	1274	1178
46	2370	2247	2127	2010	1897	1786	1678	1573	1470	1370	1272	1176
47	2368	2245	2125	2009	1895	1785	1677	1571	1469	1368	1270	1174
48	2366	2243	2123	2007	1893	1783	1675	1570	1467	1367	1269	1173
49	2364	2241	2121	2005	1891	1781	1673	1568	1465	1365	1267	1171
50	2362	2239	2119	2003	1889	1779	1671	1566	1464	1363	1266	1170
51	2359	2237	2117	2001	1888	1777	1670	1565	1462	1362	1264	1168
52	2357	2235	2115	1999	1886	1775	1668	1563	1460	1360	1262	1167
53	2355	2233	2113	1997	1884	1774	1666	1561	1459	1359	1261	1165
54	2353	2231	2111	1995	1882	1772	1664	1559	1457	1357	1259	1163
55	2351	2229	2109	1993	1880	1770	1663	1558	1455	1355	1257	1162
36	2349	2227	2107	1991	1878	1768	1661	1556	1454	1354	1256	1160
57	2347	2225	2105	1989	1876	1766	1659	1554	1452	1352	1254	1159
58	2345	2223	2103	1987	1875	1765	1657	1552	1450	1350	1253	1157
59	2343	2220	2101	1986	1873	1763	1655	1551	1449	1349	1251	1156
60	2341	2218	2099	1984	1871	1761	1654	1549	1447	1347	1249	1154

TABULA LOGARITHMORUM LOGISTICORUM.

′	46	47	48	49	50	51	52	53	54	55	56	57	58	59
″	2760	2820	2880	2940	3000	3060	3120	3180	3240	3300	3360	3420	3480	3540
0	1154	1061	969	880	792	706	621	539	458	378	300	223	147	73
1	1152	1059	968	878	790	704	620	537	456	377	298	221	146	72
2	1151	1057	966	877	789	703	619	536	455	375	297	220	145	71
3	1149	1056	965	875	787	702	617	535	454	374	296	219	143	69
4	1148	1054	963	874	786	700	616	533	452	373	294	218	142	68
5	1146	1053	962	872	785	699	615	532	451	371	293	216	141	67
6	1145	1051	960	871	783	697	613	531	450	370	292	215	140	66
7	1143	1050	959	869	782	696	612	529	448	369	291	214	139	64
8	1141	1048	957	868	780	694	610	528	447	367	289	213	137	63
9	1140	1047	956	866	779	693	609	526	446	366	288	211	136	62
10	1138	1045	954	865	777	692	608	525	444	365	287	210	135	61
11	1137	1044	953	863	776	690	606	524	443	363	285	209	134	60
12	1135	1042	951	862	774	689	605	522	442	362	284	208	132	58
13	1134	1041	950	860	773	687	603	521	440	361	283	206	131	57
14	1132	1039	948	859	772	686	602	520	439	359	282	205	130	56
15	1130	1037	947	857	770	685	601	518	438	358	280	204	129	55
16	1129	1036	945	856	769	683	599	517	436	357	279	202	127	53
17	1127	1034	944	855	767	682	598	516	435	356	278	201	126	52
18	1126	1033	942	853	766	680	596	514	434	354	276	200	125	51
19	1124	1031	941	852	764	679	595	513	432	353	275	199	124	50
20	1123	1030	939	850	763	678	594	512	431	352	274	197	122	49
21	1121	1028	938	849	762	676	592	510	430	350	273	196	121	47
22	1119	1027	936	847	760	675	591	509	428	349	271	195	120	46
23	1118	1025	935	846	759	673	590	507	427	348	270	194	119	45
24	1116	1024	933	844	757	672	588	506	426	346	269	192	117	44
25	1115	1022	932	843	756	670	587	505	424	345	267	191	116	42
26	1113	1021	930	841	754	669	585	503	423	344	266	190	115	41
27	1112	1019	929	840	753	668	584	502	422	342	265	189	114	40
28	1110	1018	927	838	751	666	583	501	420	341	264	187	112	39
29	1109	1016	926	837	750	665	581	499	419	340	262	186	111	38
30	1107	1015	924	835	749	663	580	498	418	339	261	185	110	36

TABVLA LOGARITHMORVM LOGISTICORVM.

′	46	47	48	49	50	51	52	53	54	55	56	57	58	59
″	2760	2820	2880	2940	3000	3060	3120	3180	3240	3300	3360	3420	3480	3540
30	1107	1015	924	835	749	663	580	498	418	339	261	185	110	36
31	1105	1013	923	834	747	662	579	497	416	337	260	184	109	35
32	1104	1012	921	833	746	661	577	495	415	336	258	182	107	34
33	1102	1010	920	831	744	659	576	494	414	335	257	181	106	33
34	1101	1008	918	830	743	658	574	493	412	333	256	180	105	31
35	1099	1007	917	828	741	656	573	491	411	332	255	179	104	30
36	1098	1005	915	827	740	655	572	490	410	331	253	177	103	29
37	1096	1004	914	825	739	654	570	489	408	329	252	176	101	28
38	1095	1002	912	824	737	652	569	487	407	328	251	175	100	27
39	1093	1001	911	822	736	651	568	486	406	327	250	174	99	25
40	1091	999	909	821	734	649	566	484	404	326	248	172	98	24
41	1090	998	908	819	733	648	565	483	403	324	247	171	96	23
42	1088	996	906	818	731	647	563	482	402	323	246	170	95	22
43	1087	995	905	816	730	645	562	480	400	322	244	169	94	21
44	1085	993	903	815	729	644	561	479	399	320	243	167	93	19
45	1084	992	902	814	727	642	559	478	398	319	242	166	91	18
46	1082	990	900	812	726	641	558	476	396	318	241	165	90	17
47	1081	989	899	811	724	640	557	475	395	316	239	163	89	16
48	1079	987	897	809	723	638	555	474	394	315	238	162	88	15
49	1078	986	896	808	721	637	554	472	392	314	237	161	87	13
50	1076	984	894	806	720	635	552	471	391	313	235	160	85	12
51	1074	983	893	805	719	634	551	470	390	311	234	158	84	11
52	1073	981	891	803	717	633	550	468	388	310	233	157	83	10
53	1071	980	890	802	716	631	548	467	387	309	232	156	82	8
54	1070	978	888	801	714	630	547	466	386	307	230	155	80	7
55	1068	977	887	799	713	628	546	464	384	306	229	153	79	6
56	1067	975	885	798	711	627	544	463	383	305	228	152	78	5
57	1065	974	884	796	710	626	543	462	382	304	227	151	77	4
58	1064	972	883	795	709	624	541	460	381	302	225	150	75	2
59	1062	971	881	793	707	623	540	459	379	301	224	148	74	1
60	1061	969	880	792	706	621	539	458	378	300	223	147	73	0

LOGARITHMORUM LOGISTICORUM SUPPLEMENTUM.

′	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
″	3600	3660	3720	3780	3840	3900	3960	4020	4080	4140	4200	4260	4320	4380	4440
0	0	71	142	212	280	347	414	479	543	607	669	731	792	851	911
2	2	74	144	214	282	350	416	481	545	609	671	733	794	853	912
4	5	76	147	216	285	352	418	483	548	611	673	735	796	855	914
6	7	79	149	218	287	354	420	485	550	613	675	737	798	857	916
8	9	81	151	221	289	356	422	488	552	615	677	739	800	859	918
10	12	83	154	223	291	358	425	490	554	617	679	741	802	861	920
12	14	86	156	225	294	361	427	492	556	619	682	743	804	863	922
14	17	88	158	228	296	363	429	494	558	621	684	745	806	865	924
16	19	90	161	230	298	365	431	496	560	623	686	747	808	867	926
18	21	93	163	232	300	367	433	498	562	626	688	749	810	869	928
20	24	95	165	235	303	370	436	500	565	628	690	751	812	871	930
22	26	98	168	237	305	372	438	503	567	630	692	753	814	873	932
24	29	100	170	239	307	374	440	505	569	632	694	755	816	875	934
26	31	102	172	241	309	376	442	507	571	634	696	757	818	877	936
28	33	105	175	244	312	378	444	509	573	636	698	759	820	879	938
30	36	107	177	246	314	381	446	511	575	638	700	761	822	881	940
32	38	109	179	248	316	383	449	513	577	640	702	763	824	883	942
34	41	112	182	250	318	385	451	516	579	642	704	765	826	885	944
36	43	114	184	253	321	387	453	518	581	644	706	767	828	887	946
38	45	116	186	255	323	389	455	520	584	646	708	769	830	889	948
40	48	119	189	257	325	392	457	522	586	648	710	771	832	891	949
42	50	121	191	260	327	394	459	524	588	651	712	773	834	893	951
44	52	123	193	262	329	396	462	526	590	653	714	775	836	895	953
46	55	126	195	264	332	398	464	528	592	655	716	777	838	897	955
48	57	128	198	266	334	400	466	530	594	657	719	779	840	899	957
50	60	130	200	269	336	403	468	533	596	659	721	781	841	901	959
52	62	133	202	271	338	405	470	535	598	661	723	783	843	903	961
54	64	135	205	273	341	407	472	537	600	663	725	785	845	905	963
56	67	137	207	275	343	409	475	539	602	665	727	787	847	907	965
58	69	140	209	278	345	411	477	541	605	667	729	790	849	909	967
60	71	142	212	280	347	413	479	543	607	669	731	792	851	911	969

Hæc pars Tabulæ Logiſtices *addenda eſt cum eſt in Primo termino proportionis, ſubtrahenda in Secundo & Tertio.*

FINIS.

LUNÆ MERIDIANÆ

ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ

a die Jan. 13. Anni Juliani MDCCXXII ad

diem Dec. 4. Anni MDCCXXV,

ET EJUSDEM

LONGITUDINES IBIDEM OBSERVATÆ

a die Dec. 5. Anni Juliani MDCCXXV ad

diem Dec. 27. Anni MDCCXXXIX.

CUM COMPUTO TABULARUM

COLLATÆ.

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	′	′	″
Jan.	13	6	22	4	6	10	7	3	5	54	39	14	0	39	13	25	—0	35
	14	7	7	53	6	11	2	3	17	57	51	42	0	51	41	3	—0	57
	15	7	54	20	6	11	58	3	29	41	64	20	0	64	19	40	—0	20
	16	8	41	53	6	12	54	4	11	8	77	14	10	77	13	24	—0	46
	17	9	30	20	6	13	49	4	22	22	90	22	0	90	21	53	—0	7
	18	10	19	18	6	14	45	5	3	27	103	37	50	103	37	45	—0	5
	19	11	8	14	6	15	41	5	14	27	116	53	0	116	51	40	—1	20
Cent.	20	11	57	30	6	16	37	5	25	26	130	13	0	130	10	35	—2	25
Feb.	12	6	37	10	7	6	58	3	9	6	72	35	0	72	33	44	—1	16
	13	7	25	44	7	7	54	3	20	42	85	44	45	85	43	36	—1	9
	14	8	14	45	7	8	49	4	2	5	99	1	0	99	0	34	—0	26
	15	9	3	42	7	9	44	4	13	19	112	17	0	112	17	23	+0	23
	16	9	52	11	7	10	39	4	24	29	125	25	0	125	24	20	—0	40
Cent.	19	12	11	42	7	13	24	5	28	2	163	21	0	163	17	40	—3	20
	21	13	40	25	7	15	14	6	21	7	187	33	30	187	29	50	—3	40
	24	15	57	34	7	17	58	7	27	52	224	53	40	224	48	43	—4	57
	25	16	48	2	7	18	53	8	10	51	238	32	0	238	27	20	—4	40
Mart.	11	4	28	58	8	0	45	2	6	23	67	2	45	67	3	16	+0	31
	15	7	46	25	8	4	23	3	22	54	120	30	0	120	29	0	—1	0
	16	8	34	13	8	5	17	4	4	15	133	28	0	133	27	0	—1	0
	17	9	20	42	8	6	11	4	15	36	146	6	20	146	5	45	—0	35
	18	10	6	2	8	7	6	4	27	1	158	27	20	158	26	48	—0	32
	19	10	50	30	8	7	59	5	8	32	170	35	0	170	32	50	—2	10
Cent.	20	11	35	35	8	8	54	5	20	14	182	52	40	182	50	0	—2	40
	22	13	6	41	8	10	42	6	14	21	207	41	0	207	36	28	—4	32
: :	24	14	45	11	8	12	30	7	9	42	234	10	30	234	7	0	—3	30
	25	15	38	2	8	13	24	7	22	54	248	35	0	248	30	42	—4	18
	26	16	34	36	8	14	18	8	6	22	263	44	30	263	39	23	—5	7
	27	17	33	28	8	15	13	8	20	8	279	29	20	279	24	15	—5	5
	29	19	32	20	8	17	1	9	18	5	311	15	30	311	9	32	—5	58
	30	20	29	20	8	17	55	10	2	5	326	32	30	326	27	10	—5	20
	31	21	23	42	8	18	50	10	15	58	341	9	0	341	5	14	—3	46
Apri.	8	3	8	30	8	27	6	1	15	57	74	29	0	74	28	3	—0	57
Cent.	20	12	36	c	9	5	47	6	8	30	228	34	45	228	31	20	—3	25

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno Juliano MDCCXXII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☼*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	'	''	S.	o.	'	S.	o.	'	o.	'	''	o.	'	''	'	''
Apri.	24	16	28	0	9	9	21	8	2	57	290	40	30	290	37	43	—2	47
	25	17	27	51	9	10	15	8	16	58	306	40	0	306	36	44	—3	16
	29	21	0	20	9	13	48	10	11	57	003	53	15	003	48	53	—4	22
Maii.	7	2	40	35	9	19	58	1	8	3	96	4	30	96	2	8	—2	22
	8	3	31	2	9	20	52	1	19	32	109	42	30	109	40	33	—1	57
	11	5	53	52	9	23	31	2	23	48	148	28	0	148	27	20	—0	40
	12	6	38	15	9	24	24	3	5	22	160	34	50	160	34	38	—0	12
	13	7	21	41	9	25	16	3	17	4	172	27	15	172	26	36	—0	39
	14	8	4	57	9	26	9	3	29	0	184	17	0	184	16	10	—0	50
	15	8	48	57	9	27	2	4	11	13	196	18	5	196	16	57	—1	8
	16	9	34	45	9	27	54	4	23	45	208	46	0	208	44	50	—1	10
	17	10	23	24	9	28	47	5	6	37	221	57	10	221	54	23	—2	47
	21	14	17	20	10	2	20	7	1	28	284	32	0	284	32	9	+0	9
	24	17	16	12	10	4	59	8	14	2	332	19	30	332	19	0	—0	30
	28	20	32	50	10	8	30	10	7	46	25	34	0	25	31	15	—2	45
	29	21	19	24	10	9	22	10	20	21	38	13	30	38	11	15	—2	15
Junii.	::8	4	33	40	10	17	15	2	4	17	155	57	30	155	55	20	—2	10
	9	5	16	51	10	18	8	2	15	45	167	46	0	167	45	06	—0	54
	11	6	41	57	10	19	53	3	9	23	191	4	20	191	3	33	—0	47
	12	7	25	45	10	20	45	3	21	40	203	2	40	203	1	23	—1	17
	13	8	11	53	10	21	37	4	4	19	215	35	40	215	33	55	—1	45
	14	9	1	30	10	22	30	4	17	23	229	0	50	228	58	25	—2	25
	15	9	55	30	10	23	23	5	0	51	243	32	0	243	29	5	—2	55
	16	10	55	18	10	24	16	5	14	43	259	31	0	259	29	14	—1	46
Ecl. ☽	17	13	48	36	10	25	13	6	0	0	♋ 6	49	0	♑ 6	48	35	—0	25
	18	13	3	24	10	26	2	6	13	21	293	35	50	293	36	23	+0	33
	19	14	6	42	10	26	55	6	27	51	310	27	20	310	27	46	+0	26
	21	16	2	52	10	28	41	7	26	35	341	32	40	341	32	24	—0	16
	23	17	44	8	11	0	26	8	24	17	08	54	0	8	53	13	—0	47
	: : 24	18	31	25	11	1	18	9	7	34	21	44	30	21	42	51	—1	39
	: : 26	20	4	45	11	3	3	10	2	57	47	6	30	47	4	37	—1	53
	: : 27	20	52	23	11	3	56	10	15	6	60	2	15	60	0	57	—1	18
	: : 28	21	41	16	11	4	49	10	26	55	73	16	30	73	15	20	—1	10

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCXXII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia* ☾ *à* ☉			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	″	″
Julii. : :	8	4	38	10	11	12	42	2	8	22	186	39	30	186	39	25	−0	5
*	9	9	36	30	11	13	43	2	22	21	♎20	12	40	♎20	13	0	+0	20
	10	6	4	20	11	14	26	3	2	30	210	14	0	210	13	40	−0	20
: :	12	7	41	10	11	16	12	3	28	13	236	29	0	236	27	35	−1	25
	15	10	39	6	11	18	51	5	10	3	284	2	20	284	0	20	−2	0
Cent.	16	11	44	55	11	19	44	5	24	38	301	31	30	301	30	32	−0	58
: :	19	14	44	40	11	22	23	7	8	22	349	33	0	349	34	20	+1	20
: :	21	16	26	30	11	24	9	8	6	13	17	2	20	17	0	40	−1	40
	22	17	14	36	11	25	0	8	19	36	30	3	0	30	1	20	−1	40
	23	18	2	0	11	25	53	9	2	32	42	56	45	42	54	54	−1	51
	24	18	49	50	11	26	47	9	15	2	55	55	45	55	54	5	−1	40
Aug.	7	4	45	50	0	8	15	2	13	53	218	9	0	218	10	9	+1	9
	10	7	20	15	0	10	54	3	22	58	259	49	0	259	48	50	−0	10
	11	8	20	5	0	11	48	4	6	52	275	48	0	275	46	43	−1	17
	13	10	25	47	0	13	35	5	5	37	309	17	0	309	14	35	−2	25
Cent.	14	11	28	25	0	14	29	5	20	14	325	58	15	325	56	27	−1	48
Cent.	15	12	26	48	0	15	23	6	4	48	341	35	30	341	33	37	−1	53
	17	14	15	7	0	17	10	7	3	21	10	43	0	10	41	24	−1	36
	18	15	5	22	0	18	3	7	17	9	24	18	0	24	16	22	−1	38
	20	16	43	53	0	19	50	8	13	32	50	58	0	50	55	34	−2	26
	21	17	33	32	0	20	43	8	26	7	64	23	30	64	20	11	−3	19
	26	21	42	4	0	25	11	10	24	24	131	38	0	131	38	43	+0	43
Sept. : :	4	7	30	25	1	2	28	1	27	41	228	42	20	228	43	55	+1	35
*	5	4	19	30	1	3	13	2	8	15	240	8	0	240	12	33	+4	33
	8	7	8	42	1	5	55	3	18	24	285	30	20	285	31	31	+1	11
	9	8	9	34	1	6	50	4	2	30	301	45	0	301	46	11	+1	11
	11	10	8	21	1	8	38	5	1	8	333	29	45	333	27	17	−2	28
	12	11	4	7	1	9	33	5	15	28	348	27	40	348	25	42	−1	58
Cent.	13	11	58	42	1	10	27	5	29	40	3	8	0	3	5	25	−2	35
	15	13	42	10	1	12	15	6	27	17	31	2	30	30	59	56	−2	34
	16	14	32	44	1	13	9	7	10	36	44	42	0	44	39	01	−2	59
	17	15	23	38	1	14	4	7	23	33	58	26	50	58	23	18	−3	32
	18	16	15	2	1	14	58	8	6	8	72	19	0	72	15	35	−3	25

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Octob.	5	5	2	7	1	29	29	2	16	36	280	23	7	280	28	58	+5	51
	7	7	0	20	2	1	19	3	14	13	311	59	20	312	0	54	+1	34
	8	7	57	27	2	2	14	3	28	15	327	17	50	327	17	52	—0	2
	9	8	52	17	2	3	9	4	12	20	342	1	30	342	0	32	—0	58
	10	9	44	53	2	4	4	4	26	20	356	12	0	356	10	55	—1	5
Cent.	11	10	37	7	2	4	58	5	10	12	10	16	35	10	15	25	—1	10
Cent.	12	11	27	29	2	5	54	5	23	48	23	53	20	23	51	48	—1	32
Cent.	13	12	17	56	2	6	49	6	7	9	37	31	25	37	29	45	—1	40
	14	13	10	17	2	7	44	6	20	13	51	38	0	51	35	29	—2	31
	15	14	2	23	2	8	39	7	1	58	65	40	40	65	37	56	—2	44
	16	14	55	17	2	9	34	7	15	24	79	55	30	79	51	22	—4	8
	17	15	48	11	2	10	29	7	27	33	94	10	20	94	5	40	—4	40
	19	17	30	42	2	12	20	8	21	8	121	50	30	121	45	29	—5	1
	20	18	18	57	2	13	15	9	2	40	134	55	20	134	50	57	—4	23
	23	20	31	38	2	16	0	10	6	50	171	8	30	171	6	10	—2	20
	24	21	13	43	2	16	55	10	18	17	182	40	40	182	38	0	—2	40
Nov.	2	3	56	34	2	24	18	1	28	27	291	33	10	291	36	44	+3	34
	3	4	55	45	2	25	14	2	12	13	307	22	30	307	25	56	+3	26
	5	6	47	14	2	27	5	3	10	0	337	17	30	337	18	46	+1	16
	7	8	28	50	2	28	56	4	7	32	4	44	0	4	44	10	+0	10
	9	10	6	38	3	0	48	5	4	17	31	13	20	31	13	14	—0	6
	10	10	56	22	3	1	43	5	17	16	44	40	30	44	41	0	+0	30
Cent.	11	11	48	42	3	2	39	5	29	58	58	46	50	58	46	3	—0	47
	13	13	35	55	3	4	31	6	24	33	87	37	30	87	34	59	—2	31
	14	14	29	9	3	5	26	7	6	27	101	57	30	101	54	18	—3	12
	16	16	11	5	3	7	18	7	29	43	129	28	45	129	24	45	—4	0
	18	17	43	15	3	9	9	8	22	32	154	33	20	154	30	32	—2	48
	19	18	26	8	3	10	5	9	3	56	166	17	45	166	15	57	—1	48
	20	19	7	56	3	11	1	9	15	24	177	45	30	177	43	44	—1	46
Ecl.☉	27	2	7	25	3	16	40	0	0	0	♐16	17	43	♐16	17	30	—0	13
Dec.	2	4	43	51	3	21	16	2	7	35	332	58	30	333	0	12	+1	42
	4	6	26	40	3	23	8	3	5	18	00	43	0	00	43	13	+0	13
	7	8	50	46	3	25	56	4	15	8	39	48	0	39	46	46	—1	14
Cent.	10	11	24	37	3	28	44	5	22	17	81	19	30	81	19	8	—0	22

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Cent.	11	12	17	46	3	29	40	6	4	7	95	38	0	95	36	55	—1	5
Dec.	13	14	2	41	4	1	32	6	27	10	123	54	30	123	51	40	—2	50
	15	15	37	24	4	3	24	7	19	43	149	37	20	149	35	7	—2	13
	17	17	3	0	4	5	16	8	12	14	173	3	0	173	1	18	—1	42
	18	17	44	0	4	6	11	8	23	38	184	19	0	184	17	22	—1	38
	20	19	7	19	4	8	3	9	17	5	207	10	30	207	8	44	—1	46
	21	19	51	54	4	8	59	9	29	15	219	20	0	219	18	37	—1	23
	22	20	39	58	4	9	55	10	11	46	232	22	0	232	19	56	—2	4
Dec.	31	4	22	38	4	17	25	2	2	25	356	14	20	356	15	0	+0	40
∗	31	6	13	20	4	17	29	2	3	28	357	31	25	357	32	47	+1	22

Anno JULIANO MDCCXXIII. Currente.

Jan.	2	6	0	48	4	19	17	2	29	54	22	49	0	22	47	50	—1	10
	6	9	18	9	4	23	1	4	20	46	76	14	0	76	11	57	—2	3
	7	10	10	17	4	23	57	5	2	39	90	17	20	90	16	13	—1	7
Cent.	10	12	44	36	4	26	44	6	6	50	131	55	45	131	53	26	—2	19
	11	13	32	40	4	27	40	6	17	56	144	58	0	144	55	43	—2	17
	12	14	17	13	4	28	36	6	28	58	157	7	0	157	3	33	—3	27
	13	14	59	40	4	29	32	7	10	0	168	44	30	168	42	26	—2	4
	14	15	40	44	5	0	27	7	21	8	180	1	30	179	59	30	—2	0
Jan.	16	17	2	11	5	2	18	8	13	54	202	25	0	202	24	4	—0	56
Feb. ::	7	11	27	22	5	21	47	5	17	9	140	10	0	140	8	57	—1	3
	9	12	57	47	5	23	38	6	9	13	164	48	15	164	45	50	—2	25
::	10	13	39	10	5	24	33	6	19	59	176	10	0	176	7	20	—2	40
	11	14	19	51	5	25	28	7	1	0	187	21	0	187	17	19	—3	41
	12	15	0	21	5	26	23	7	12	11	198	29	20	198	26	34	—2	46
	13	15	41	50	5	27	17	7	23	36	209	52	20	209	49	53	—2	27
	17	18	55	30	6	0	58	9	12	47	262	21	40	262	20	14	—1	26
Feb. ∗	26	7	32	13	6	8	31	1	9	9	27	33	30	27	35	0	+1	30
Mart. ::	1	5	8	23	6	11	5	2	16	46	66	50	50	66	48	19	—2	31
	2	6	1	23	6	11	59	2	29	27	81	7	0	81	4	4	—2	56
	3	6	54	22	6	12	54	3	11	43	95	23	0	95	19	47	—3	13

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
Mart.	4	7	46	28	6	13	49	3	23	38	109	26	0	109	22	53	−3	7
	6	9	25	2	6	15	38	4	16	35	136	6	50	136	5	12	−1	38
	7	10	10	47	6	16	33	4	27	43	148	34	0	148	32	20	−1	40
	8	10	54	21	6	17	27	5	8	45	160	28	30	160	27	2	−1	38
	11	12	59	41	6	20	10	6	11	45	194	51	0	194	47	44	−3	16
	12	13	40	55	6	21	4	6	22	58	206	10	20	206	6	52	−3	28
	13	14	23	38	6	21	58	7	4	23	217	52	0	217	48	50	−3	10
	14	15	8	51	6	22	52	7	16	7	230	11	10	230	7	2	−4	8
	15	15	57	6	6	23	47	7	28	11	243	16	10	243	12	27	−3	43
	16	16	48	57	6	24	41	8	10	55	257	15	0	257	11	38	−3	22
	17	17	44	18	6	25	36	8	23	33	272	6	50	272	3	12	−3	38
	18	18	42	21	6	26	30	9	6	52	287	39	0	287	34	44	−4	16
	19	19	41	36	6	27	25	9	20	35	303	29	15	303	24	25	−4	50
	20	20	40	27	6	28	19	10	4	37	319	13	40	319	8	32	−5	8
	21	21	37	42	6	29	14	10	18	54	334	34	0	334	29	21	−4	39
	22	22	32	55	7	0	8	11	3	19	349	23	30	349	18	24	−5	6
	27	2	1	49	7	3	45	1	0	0	45	42	15	45	42	35	+0	20
Mar.	29	3	50	26	7	5	33	1	26	38	74	54	10	74	53	21	−0	49
Apri.	1	6	31	30	7	8	15	3	3	45	118	14	15	118	12	18	−1	57
	2	7	21	6	7	9	9	3	15	28	131	39	15	131	37	49	−1	28
	4	8	52	10	7	10	56	4	8	13	156	27	20	156	26	45	−0	35
	6	10	15	32	7	12	43	5	0	31	179	19	40	179	19	38	−0	2
	7	10	56	10	7	13	37	5	11	40	190	30	0	190	28	57	−1	3
	8	11	37	15	7	14	30	5	22	54	201	47	0	201	45	15	−1	45
Cent.	9	12	20	43	7	15	24	6	4	17	213	40	0	213	37	43	−2	17
	10	13	6	31	7	16	17	6	15	55	226	8	0	226	4	40	−3	20
	12	14	45	20	7	18	4	7	10	1	252	52	20	252	48	45	−3	35
	14	16	36	44	7	19	52	8	5	33	282	46	30	282	42	29	−4	1
	16	18	32	25	7	21	40	9	2	31	313	44	45	313	40	11	−4	34
	18	20	22	26	7	23	26	10	0	30	343	17	45	343	11	57	−5	48
	19	21	14	41	7	24	20	10	14	41	357	22	45	357	16	50	−5	55
	26	2	31	25	7	29	40	1	6	42	82	41	30	82	40	24	−1	6
Apri.	29	5	13	41	8	2	20	2	13	44	126	19	45	126	19	44	−0	1
Maii.	1	6	48	4	8	4	7	3	7	4	151	57	40	151	57	48	+0	8

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	″	″
Maii.	2	7	31	11	8	4	59	3	18	29	163	45	20	163	46	01	+0	41
	3	8	12	34	8	5	52	3	29	49	175	6	45	175	8	2	+1	17
	4	8	53	10	8	6	45	4	11	9	186	16	30	186	17	22	+0	52
: :	5	9	33	48	8	7	38	4	22	31	197	27	0	197	28	43	+1	43
	6	10	15	44	8	8	30	5	4	0	208	56	45	208	57	5	+0	20
	7	10	59	45	8	9	23	5	15	40	220	58	0	220	57	12	—0	48
	9	12	39	41	8	11	9	6	9	47	247	59	30	247	56	55	—2	35
	10	13	34	2	8	12	2	6	22	17	262	36	0	262	32	58	—3	2
	26	3	3	17	8	25	17	1	12	2	120	15	0	120	14	54	—0	6
	28	4	41	44	8	27	2	2	5	37	146	54	0	146	54	20	+0	20
Maii.	31	6	49	3	8	29	40	3	10	1	181	46	30	181	47	40	+1	10
Junii.	1	7	29	20	9	0	32	3	21	29	192	51	30	192	53	14	+1	44
	2	8	10	20	9	1	24	4	3	3	204	7	15	204	8	48	+1	33
	3	8	53	3	9	2	17	4	14	47	215	49	0	215	50	39	+1	39
	5	10	27	56	9	4	2	5	8	58	241	34	20	241	34	28	+0	8
Cent.	6	11	22	32	9	4	55	5	21	31	256	14	50	256	14	32	—0	18
Cent.	7	12	19	47	9	5	47	6	4	24	271	35	0	271	34	30	—0	30
	8	13	20	44	9	6	40	6	17	36	287	51	0	287	49	59	—1	1
Cent. : :	9	14	19	31	9	7	33	7	1	5	303	34	15	303	33	23	—0	52
	10	15	19	9	9	8	26	7	14	49	319	30	20	319	28	42	—1	38
	11	16	14	38	9	9	19	7	28	42	334	24	0	334	21	58	—2	2
	13	17	57	16	9	11	4	8	26	38	02	6	0	02	1	51	—4	9
	15	19	34	45	9	12	49	9	24	14	28	30	30	28	26	7	—4	23
	18	22	9	34	9	15	28	11	4	0	70	16	40	70	13	50	—2	50
: :	28	5	24	58	9	23	21	2	20	15	188	17	45	188	18	58	+1	13
	29	6	5	8	9	24	13	3	1	44	199	21	0	199	23	5	+2	5
Junii.	30	6	46	29	9	25	5	3	13	23	210	42	0	210	44	5	+2	5
Julii.	1	7	30	4	9	25	57	3	25	15	222	36	45	222	38	56	+2	11
	2	8	17	3	9	26	50	4	7	24	235	22	30	235	23	50	+1	20
	4	10	3	46	9	28	35	5	2	43	264	6	0	264	5	20	—0	40
	5	11	3	0	9	29	28	5	15	56	279	56	0	279	55	14	—0	46
Cent.	7	13	6	10	10	1	15	6	13	20	312	47	0	312	46	13	—0	47
	10	15	53	12	10	3	53	7	25	42	357	36	40	357	35	54	—0	46
	11	16	43	22	10	4	46	8	9	48	11	10	0	11	8	14	—1	46

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Julii.	13	18	21	53	10	6	31	9	7	26	37	50	30	37	47	47	−2	43
	14	19	12	22	10	7	24	9	20	50	51	31	0	51	27	2	−3	58
	16	20	58	41	10	9	10	10	16	42	80	6	30	80	4	43	−1	47
	17	21	53	28	10	10	3	10	29	6	94	49	30	94	48	30	−1	0
	23	1	59	32	10	14	27	0	27	11	161	26	30	161	28	0	+1	30
: :	25	3	21	48	10	16	12	1	19	31	184	2	0	184	2	54	+0	54
	26	4	1	36	10	17	4	2	0	46	195	0	0	195	1	32	+1	32
Julii.	30	6	56	30	10	20	35	3	17	49	242	47	0	242	49	15	+2	15
Aug.	1	8	45	40	10	22	22	4	13	24	272	7	0	272	6	15	−0	45
	3	10	46	53	10	24	8	5	10	36	304	28	40	304	26	7	−2	33
	5	12	47	42	10	25	55	6	9	1	336	44	15	336	41	54	−2	21
	6	13	42	48	10	26	49	6	23	26	351	32	0	351	29	55	−2	5
	7	14	35	27	10	27	42	7	7	51	5	43	0	5	41	17	−1	43
	8	15	26	37	10	28	35	7	22	8	19	31	45	19	29	47	−1	58
: :	9	16	17	14	10	29	28	8	6	13	33	12	0	33	11	44	−0	16
	11	18	1	9	11	1	15	9	3	26	61	13	40	61	10	14	−3	26
	14	20	43	44	11	3	55	10	11	27	104	56	30	104	55	37	−0	53
	25	4	3	38	11	12	47	2	4	24	225	4	30	225	8	42	+4	12
	26	4	49	28	11	13	41	2	16	11	237	33	0	237	36	56	+3	56
	27	5	38	56	11	14	34	2	28	20	250	56	0	250	59	28	+3	28
	28	6	32	20	11	15	28	3	10	53	265	18	30	265	21	40	+3	10
	29	7	29	17	11	16	22	3	23	53	280	34	10	280	34	44	+0	34
	30	8	28	32	11	17	16	4	7	19	296	24	30	296	23	12	−1	18
Aug.	31	9	28	24	11	18	10	4	21	9	312	23	30	312	20	0	−3	30
Sept.	1	10	27	6	11	19	4	5	5	19	328	6	0	328	1	32	−4	28
Cent.	2	11	24	58	11	19	58	5	19	45	343	35	30	343	30	54	−4	36
Cent.	3	12	19	32	11	20	52	6	4	17	358	15	15	358	11	7	−4	8
	4	13	13	46	11	21	46	6	18	51	12	50	20	12	47	8	−3	12
	6	14	59	14	11	23	34	7	17	30	41	15	0	41	12	36	−2	24
	7	15	53	13	11	24	28	8	1	24	55	46	0	55	42	55	−3	5
	8	16	48	19	11	25	22	8	14	56	70	34	0	70	30	26	−3	34
	10	18	39	26	11	27	11	9	10	45	100	23	30	100	20	15	−3	15
	11	19	33	14	11	28	5	9	23	2	114	52	0	114	49	37	−2	23
	12	20	24	29	11	28	59	10	4	56	128	42	0	128	40	59	−1	1

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia* ☾ *à* ☉			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Sept.	13	21	12	42	11	29	53	10	16	30	141	46	15	141	46	54	+0	39
::	14	21	57	55	0	0	47	10	27	49	154	5	30	154	7	51	+2	21
::	20	1	19	47	0	5	16	0	22	46	209	37	30	209	40	53	+3	23
	23	3	34	11	0	7	58	1	27	5	246	16	30	246	21	20	+4	50
	24	4	25	20	0	8	53	2	9	9	260	5	0	260	9	39	+4	39
	25	5	19	41	0	9	47	2	21	38	274	41	30	274	45	38	+4	8
	26	6	16	21	0	10	42	3	4	32	289	53	0	289	56	0	+3	0
	27	7	14	3	0	11	37	3	17	52	305	20	0	305	20	19	+0	19
::	28	8	11	17	0	12	32	4	1	35	320	40	0	320	38	16	—1	44
	29	9	7	13	0	13	26	4	15	39	335	40	20	335	36	7	—4	13
Sept.	30	10	1	30	0	14	21	4	29	58	350	16	0	350	11	34	—4	26
Octo.	1	10	54	38	0	15	16	5	14	25	4	34	30	4	29	31	—4	59
Cent.	2	11	48	40	0	16	11	5	28	56	19	6	15	19	1	32	—4	43
Cent. ::	3	12	42	13	0	17	6	6	13	21	:: 33	31	0	33	25	42	—5	18
	4	13	38	12	0	18	0	6	27	36	48	32	0	48	28	15	—3	45
::	5	14	34	50	0	18	56	7	11	32	63	43	0	63	38	52	—4	8
	6	15	32	21	0	19	51	7	25	7	79	9	40	79	5	37	—4	3
::	7	16	30	10	0	20	46	8	8	18	94	36	0	94	32	18	—3	42
::	8	17	26	20	0	21	41	8	21	3	109	40	0	109	36	26	—3	34
	9	18	19	45	0	22	36	9	3	23	124	2	30	123	58	50	—3	40
	10	19	9	40	0	23	30	9	15	21	137	32	30	137	29	34	—2	56
	12	20	39	36	0	25	20	10	8	21	162	03	30	162	3	10	—0	20
	13	21	20	55	0	26	15	10	19	31	173	24	0	173	25	0	+1	0
	14	22	0	58	0	27	9	11	0	34	184	25	30	184	26	57	+1	27
Octo.	21	2	21	52	1	2	38	1	8	8	255	44	40	255	48	0	+3	20
	22	3	15	10	1	3	34	1	20	14	270	5	30	270	9	29	+4	0
	24	5	7	0	1	5	25	2	15	33	300	5	50	300	9	11	+3	21
	25	6	2	51	1	6	20	2	28	46	315	5	0	315	6	21	+1	21
::	26	6	57	3	1	7	16	3	12	19	329	39	30	329	40	21	+0	51
::	27	7	49	56	1	8	11	3	26	12	343	54	0	343	51	36	—2	24
::	28	8	41	2	1	9	6	4	10	17	357	46	0	357	43	30	—2	30
	29	9	32	27	1	10	2	4	24	31	11	34	30	11	30	43	—3	47
	30	10	24	19	1	10	57	5	8	47	25	33	30	25	29	26	—4	4
Cent.	31	11	19	2	1	11	53	5	23	0	40	15	30	40	11	56	—3	34

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	″	″
Cent.	1	12	15	0	1	12	48	6	7	3	55	16	15	55	12	43	—3	32
Cent.	2	13	13	11	1	13	44	6	20	51	70	50	50	70	47	40	—3	10
Nov.	3	14	13	56	1	14	40	7	4	20	87	3	10	86	59	26	—3	44
	4	15	12	51	1	15	36	7	17	27	102	49	0	102	45	58	—3	2
	6	17	2	17	1	17	27	8	12	32	132	13	15	132	9	30	—3	45
	7	17	51	3	1	18	23	8	24	32	145	26	0	145	23	14	—2	46
	8	18	36	11	1	19	18	9	6	14	157	44	0	157	42	1	—1	59
	9	19	18	27	1	20	14	9	17	42	169	19	0	169	18	5	—0	55
	13	21	59	43	1	23	55	11	2	34	213	41	0	213	41	42	+0	42
	20	3	2	50	1	29	29	1	13	52	295	34	20	295	35	15	+0	55
	24	6	35	31	2	3	13	3	7	12	352	50	30	352	48	40	—1	50
	25	7	24	46	2	4	9	3	21	7	06	10	30	6	9	9	—1	21
	26	8	14	8	2	5	5	4	5	6	19	32	0	19	30	19	—1	41
: :	28	9	58	3	2	6	57	5	2	56	47	33	20	47	31	0	—2	20
Cent.	29	10	55	15	2	7	53	5	16	40	62	53	0	62	51	56	—1	4
Cent.	30	11	53	53	2	8	49	6	0	10	78	34	0	78	33	29	—0	31
Cent.	1	12	53	45	2	9	46	6	13	22	94	33	35	94	32	13	—1	22
Dec.	2	13	53	50	2	10	42	6	26	15	110	36	15	110	34	50	—1	25
	3	14	49	43	2	11	38	7	8	47	125	36	0	125	34	30	—1	30
	5	16	29	15	2	13	30	8	2	55	152	31	15	152	29	43	—1	32
	6	17	13	22	2	14	26	8	14	36	164	34	0	164	32	33	—1	27
	7	17	54	54	2	15	22	8	26	6	175	58	0	175	56	16	—1	44
	8	18	34	55	2	16	17	9	7	30	186	59	0	186	57	25	—1	35
	9	19	14	32	2	17	13	9	18	49	197	54	0	197	53	0	—1.	0
	11	20	37	7	2	19	4	10	11	34	220	34	30	220	33	13	—1	17
: :	24	6	59	42	3	0	17	3	16	16	28	28	30	28	27	26	—1	4
:: ::	26	8	43	34	3	2	10	4	13	36	56	29	0	56	26	25	—2	35
: :	27	9	39	30	3	3	6	4	26	53	71	29	30	71	28	27	—1	3
Dec.	28	10	37	41	3	4	2	5	10	7	87	3	40	87	3	3	—0	37
Cent.	30	12	34	46	3	5	55	6	5	30	118	23	20	118	23	19	—0	1

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Jan.	6	17	49	40	3	12	25	8	26	58	204	13	20	204	12	36	—0	44

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	*S.*	o.	′	*S.*	o.	′	o.	′	″	o.	′	″	′	″
Jan.	17	2	27	6	3	21	44	1	2	4	343	47	40	343	46	26	—1	14
	21	5	47	26	3	25	27	2	27	42	37	57	20	37	55	40	—1	40
	22	6	39	25	3	26	23	3	11	24	51	58	30	51	55	45	—2	45
	24	8	29	54	3	28	15	4	8	1	81	38	20	81	37	49	—0	31
	25	9	27	24	3	29	11	4	20	53	97	2	20	97	1	1	—1	19
	26	10	24	8	4	0	7	5	3	25	112	15	0	112	14	33	—0	27
Cent.	27	11	19	44	4	1	3	5	15	38	127	10	30	127	11	7	+0	37
Cent.	28	12	10	50	4	1	58	5	27	32	140	58	20	140	58	28	+0	8
	30	13	43	40	4	3	50	6	20	36	166	12	0	166	11	26	—0	34
Jan.	31	14	25	22	4	4	45	7	1	51	177	39	0	177	38	18	—0	42
Feb.	2	15	45	24	4	6	35	7	24	16	199	41	5	199	39	15	—1	15
	3	16	25	43	4	7	30	8	5	30	210	46	45	210	45	37	—1	8
	4	17	7	34	4	8	25	8	16	52	222	15	0	222	14	14	—0	46
	7	19	31	11	4	11	11	9	22	20	261	13	0	261	11	27	—1	33
	15	1	58	56	4	17	39	0	26	30	05	19	0	5	19	9	+0	9
	16	2	50	9	4	18	35	1	10	45	19	8	30	19	8	51	+0	21
	18	4	34	35	4	20	25	2	9	0	47	17	30	47	16	8	—1	22
	19	5	29	13	4	21	20	2	22	47	61	58	30	61	56	18	—2	12
	20	6	25	37	4	22	15	3	6	16	77	5	45	77	2	40	—3	5
: :	21	7	22	48	4	23	11	3	19	24	92	25	0	92	22	32	—2	28
	22	8	19	30	4	24	6	4	2	9	107	37	0	107	34	15	—2	45
	23	9	14	4	4	25	1	4	14	31	122	17	0	122	15	29	—1	31
	24	10	5	31	4	25	56	4	26	31	136	10	0	136	9	0	—1	0
	25	10	53	29	4	26	51	5	8	12	149	10	30	149	10	22	—0	8
	26	11	38	18	4	27	46	5	19	37	161	23	40	161	23	14	—0	26
Feb.	28	13	3	9	4	29	35	6	11	55	184	38	10	184	36	47	—1	23
Mart.	3	15	47	8	5	3	12	7	26	18	229	41	20	229	38	5	—3	15
	6	18	14	34	5	5	56	9	1	36	269	36	20	269	32	38	—3	42
	8	20	6	21	5	7	46	9	26	57	299	36	0	299	31	38	—4	22
	9	21	3	6	5	8	41	10	10	15	314	49	0	314	44	36	—4	24
: :	17	3	18	55	5	15	2	1	19	50	55	55	20	55	58	6	+2	46
	18	4	16	56	5	15	57	2	3	49	71	27	0	71	28	21	+1	21
: :	20	6	14	17	5	17	46	3	0	39	102	50	30	102	49	12	—1	18
	21	7	10	20	5	18	40	3	13	26	117	52	30	117	51	13	—1	17

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Mart.	22	8	2	58	5	19	35	3	25	46	132	3	30	132	1	47	—1	43
	23	8	51	50	5	20	29	4	7	44	145	17	30	145	17	5	—0	25
	24	9	37	10	5	21	23	4	19	21	157	38	30	157	38	43	+0	13
Cent.	27	11	41	5	5	24	4	5	22	50	191	39	45	191	39	21	—0	24
	29	13	2	27	5	25	51	6	14	43	214	2	0	213	58	32	—3	28
	30	13	44	50	5	26	45	6	25	44	225	38	30	225	34	0	—4	30
Mart.	31	14	29	42	5	27	38	7	6	55	237	52	30	237	47	5	—5	25
Apri.	1	15	17	30	5	28	32	7	18	19	250	50	30	250	44	46	—5	44
	5	18	51	36	6	2	7	9	7	17	308	27	30	308	21	12	—6	18
	14	2	0	45	6	9	18	1	0	23	63	55	20	63	57	25	+2	5
	15	3	1	38	6	10	12	1	14	29	80	10	20	80	13	0	+2	40
::	18	5	57	26	6	12	53	2	24	23	127	12	0	127	13	46	+1	46
	20	7	35	28	6	14	40	3	18	50	153	44	50	153	46	18	+1	28
	21	8	18	59	6	15	33	4	0	31	165	38	30	165	39	55	+1	25
::	22	9	0	3	6	16	26	4	11	55	176	55	20	176	57	13	+1	53
	24	10	19	16	6	18	12	5	4	9	198	45	0	198	45	45	+0	45
	25	10	59	25	6	19	5	5	15	9	209	48	0	209	47	25	—0	35
Cent.	27	12	26	20	6	20	51	6	7	14	233	33	30	233	29	58	—3	32
Cent.	28	13	13	22	6	21	44	6	18	28	246	20	15	246	15	14	—5	1
	29	14	4	34	6	22	37	6	29	55	260	9	30	260	3	49	—5	41
April.	30	14	57	15	6	23	30	7	11	38	274	21	0	274	14	40	—6	20
Maii.	2	16	45	53	6	25	17	8	6	5	303	33	20	303	26	36	—6	44
	4	18	31	19	6	27	3	9	2	2	331	57	30	331	50	17	—7	13
::	6	20	11	27	6	28	49	9	29	27	359	1	40	358	54	11	—7	29
	7	21	1	15	6	29	42	10	13	36	12	30	0	12	23	2	—6	58
	11	5	11	22	7	2	33	0	0	0	♊ 1	37	3	♊ 1	36	21	—0	42
	14	2	46	33	7	5	1	1	8	50	104	58	30	105	1	2	+2	32
	15	3	45	42	7	5	54	1	22	9	120	47	20	120	51	2	+3	42
	16	4	40	19	7	6	47	2	5	1	135	28	15	135	31	35	+3	20
	17	5	30	10	7	7	40	2	17	29	148	57	0	148	59	39	+2	39
	19	6	58	6	7	9	26	3	11	20	172	57	50	173	0	20	+2	30
	21	8	18	0	7	11	10	4	4	10	194	57	45	194	59	45	+2	0
	22	8	57	45	7	12	3	4	15	22	205	54	50	205	56	57	+2	7
	23	9	38	50	7	12	55	4	26	32	217	12	0	217	13	7	+1	7

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″.	°.	′	″	′	″
Maii.	25	11	9	29	7	14	40	5	18	59	241	53	40	241	51	47	—1	53
Cent.	26	11	58	58	7	15	33	6	0	24	255	17	0	255	13	52	—3	8
	27	12	51	22	7	16	26	6	12	2	269	24	30	269	20	18	—4	12
	28	13	46	59	7	17	19	6	23	56	284	20	0	284	14	51	—5	9
	29	14	41	55	7	18	12	7	6	7	299	5	20	298	59	40	—5	40
Maii.	30	15	35	54	7	19	4	7	18	37	313	36	30	313	30	45	—5	45
Junii.	1	17	18	10	7	20	50	8	14	38	341	13	0	341	7	31	—5	29
	2	18	6	47	7	21	42	8	28	6	354	23	30	354	16	41	—6	49
	4	19	43	42	7	23	28	9	25	52	20	39	30	20	32	10	—7	20
	6	21	28	38	7	25	13	10	24	14	48	56	00	48	49	58	—6	2
	7	22	26	29	7	26	6	11	8	24	64	25	15	64	21	0	—4	15
	13	3	20	15	8	0	31	1	15	33	142	59	30	143	2	25	+2	55
	16	5	34	53	8	3	8	2	21	47	179	42	0	179	43	37	+1	37
	17	6	15	0	8	4	0	3	3	22	190	44	15	190	46	11	+1	56
	19	7	35	14	8	5	45	3	26	10	212	49	30	212	51	35	+2	5
	20	8	17	32	8	6	37	4	7	31	224	25	0	224	27	9	+2	9
	21	9	2	38	8	7	29	4	18	55	236	42	20	236	43	10	+0	50
	23	10	42	42	8	9	14	5	12	7	263	45	45	263	44	29	—1	16
Cent.	24	11	38	17	8	10	7	5	24	3	278	41	0	278	38	53	—2	7
Cent.	25	12	34	0	8	11	0	6	6	13	293	38	0	293	34	54	—3	6
::	26	13	30	34	8	11	53	6	18	40	308	48	0	308	44	34	—3	26
	27	14	24	12	8	12	46	7	1	24	323	13	50	323	9	18	—4	32
	29	16	4	40	8	14	31	7	27	45	350	23	30	350	19	32	—3	58
Jun.::	30	16	52	40	8	15	23	8	11	19	3	24	30	3	21	36	—2	54
Julii.	2	18	29	33	8	17	9	9	8	59	29	40	0	29	34	2	—5	58
	3	19	21	0	8	18	1	9	22	58	43	33	0	43	26	55	—6	5
	4	20	15	48	8	18	54	10	6	57	58	16	30	58	10	8	—6	22
::	13	3	29	15	8	25	57	1	20	22	174	49	0	174	49	16	+0	16
	14	4	10	20	8	26	49	2	2	3	186	6	0	186	7	8	+1	8
	16	5	30	42	8	28	34	2	25	2	208	13	20	208	14	41	+1	21
	23	11	17	56	9	4	44	5	17	55	302	10	0	302	7	22	—2	38
Cent.	24	12	14	28	9	5	37	6	0	42	317	19	30	317	15	55	—3	35
	26	14	0	1	9	7	23	6	27	6	345	45	20	345	42	30	—2	50
	27	14	49	21	9	8	16	7	10	40	359	6	30	359	4	16	—2	14

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	″	″
Julii.	28	15	38	0	9	9	9	7	24	27	12	17	0	12	14	39	−2	21
Aug.	2	20	6	12	9	13	35	10	3	45	84	27	0	84	23	26	−3	34
	3	21	6	10	9	14	28	10	17	10	100	28	0	100	25	48	−2	12
	11	2	45	58	9	20	40	1	12	26	192	33	0	192	33	34	+0	34
	17	7	14	24	9	25	58	3	21	26	265	45	30	265	45	48	+0	18
	18	8	8	30	9	26	52	4	3	33	280	18	15	280	17	20	−0	55
	19	9	4	10	9	27	46	4	15	58	295	14	30	295	12	7	−2	23
	20	9	59	52	9	28	39	4	28	43	310	11	30	310	8	12	−3	18
	21	10	54	26	9	29	33	5	11	47	324	51	30	324	47	27	−4	3
Cent.	22	11	48	25	10	0	26	5	25	10	339	22	30	339	18	11	−4	19
	24	13	30	50	10	2	14	6	22	44	7	1	20	6	58	17	−3	3
	26	15	12	27	10	4	1	7	20	57	34	28	0	34	27	26	−0	34
	27	16	6	6	10	4	55	8	5	5	48	54	15	48	52	24	−1	51
	29	18	1	0	10	6	42	9	2	58	79	40	30	79	38	28	−2	2
Aug.	30	19	0	41	10	7	36	9	16	32	95	37	30	95	36	55	−0	35
Sept.	1	20	55	36	10	9	24	10	12	36	126	24	0	126	24	40	+0	40
	2	21	47	56	10	10	18	10	25	4	140	30	30	140	32	41	+2	11
	10	2	45	22	10	16	34	1	15	20	221	58	0	221	59	50	+1	50
	15	6	51	18	10	21	4	3	13	22	288	33	0	288	33	20	+0	20
	17	8	40	0	10	22	53	4	8	41	317	46	30	317	42	49	−3	41
	18	9	32	55	10	23	47	4	21	53	332	1	20	331	56	30	−4	50
Cent.	20	11	16	30	10	25	36	5	19	22	359	57	40	359	52	47	−4	53
	22	13	0	49	10	27	25	6	17	53	28	5	0	28	1	52	−3	8
	23	13	55	18	10	28	20	7	2	18	42	43	30	42	41	22	−2	8
	24	14	52	38	10	29	14	7	16	41	58	5	0	58	3	31	−1	29
	26	16	53	49	11	1	4	8	14	51	90	26	0	90	24	31	−1	29
	27	17	54	17	11	1	59	8	28	27	106	34	40	106	32	55	−1	45
Sept.	28	18	51	53	11	2	54	9	11	38	122	0	10	121	58	32	−1	38
Octo.	1	21	20	2	11	5	38	10	18	40	162	6	0	162	7	48	+1	48
	8	1	26	0	11	11	4	0	25	44	229	40	0	229	41	50	+1	50
	13	5	36	6	11	15	39	2	23	8	297	17	45	297	19	6	+1	21
	14	6	28	50	11	16	34	3	5	31	311	30	0	311	30	51	+0	51
	15	7	20	36	11	17	29	3	18	18	325	28	0	325	26	0	−2	0
	17	9	0	49	11	19	19	4	15	4	352	33	30	352	29	22	−4	8

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno Juliano MDCCXXIV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Octo.	18	9	50	40	11	20	14	4	29	1	6	2	30	5	57	29	—5	1
	19	10	41	46	11	21	9	5	13	15	19	50	20	19	45	11	—5	9
	21	12	34	51	11	23	0	6	12	20	50	9	45	50	6	17	—3	28
	22	13	35	35	11	23	55	6	26	53	66	22	0	66	20	28	—1	32
	26	17	40	17	11	27	38	8	22	18	131	39	0	131	37	38	—1	22
	27	18	31	52	11	28	34	9	5	5	145	34	0	145	32	6	—1	54
	30	20	43	20	0	1	19	10	10	56	181	29	0	181	28	50	—0	10
Octo.	31	21	23	12	0	2	14	10	22	14	192	27	45	192	27	37	—0	8
Nov.	1	22	3	0	0	3	9	11	3	22	203	25	30	203	26	11	+0	41
	8	2	38	23	0	8	42	1	9	42	278	22	30	278	22	42	+0	12
	12	6	3	18	0	12	24	2	28	10	333	41	0	333	41	22	+0	22
	15	8	27	22	0	15	12	4	8	31	12	45	30	12	43	26	—2	4
	16	9	18	0	0	16	7	4	22	40	26	26	15	26	23	1	—3	14
	17	10	12	6	0	17	3	5	7	4	40	59	0	40	55	51	—3	9
	21	14	26	16	0	20	48	7	4	39	108	38	30	108	38	24	—0	6
	22	15	27	27	0	21	45	7	18	22	124	57	50	124	57	5	—0	45
	24	17	13	37	0	23	36	8	14	30	153	32	30	153	29	55	—2	35
	25	17	59	19	0	24	32	8	26	53	165	59	30	165	56	27	—3	3
	27	19	22	16	0	26	24	9	20	35	188	45	30	188	42	24	—3	6
Nov.	28	20	2	3	0	27	19	10	2	0	199	43	0	199	40	37	—2	23
Dec.	10	4	47	56	1	7	34	2	8	37	342	23	30	342	24	0	+0	30
	11	5	34	16	1	8	30	2	21	36	354	59	20	355	0	19	+0	59
	16	9	51	42	1	13	10	5	1	4	64	27	15	64	26	45	—0	30
Cent.	18	12	1	47	1	15	3	5	29	34	99	2	0	99	3	1	+1	1
	19	13	7	13	1	16	0	6	13	31	116	25	15	116	27	5	+1	50
	20	14	7	11	1	16	56	6	27	6	132	26	15	132	27	25	+1	10
	21	15	1	43	1	17	52	7	10	17	147	5	30	147	4	54	—0	36
	22	15	50	55	1	18	49	7	23	4	160	25	0	160	24	10	—0	50
	23	16	36	0	1	19	44	8	5	28	172	42	20	172	39	43	—2	37
::	24	17	18	16	1	20	40	8	17	31	184	17	20	184	13	22	—3	58
	26	18	39	17	1	22	31	9	10	49	206	34	0	206	29	47	—4	13
	27	19	20	35	1	23	27	9	22	11	217	54	15	217	50	3	—4	12

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Jan.	6	2	45	56	2	1	51	1	6	49	338	25	0	338	23	44	−1	16
	10	5	53	15	2	5	34	2	29	34	29	19	0	29	19	24	+0	24
	11	6	44	20	2	6	30	3	13	24	43	6	30	43	6	33	+0	3
	12	7	39	30	2	7	26	3	27	24	57	55	15	57	55	3	−0	12
Cent. ::	13	8	40	17	2	8	22	4	11	28	74	9	0	74	8	20	−0	40
	14	9	41	47	2	9	18	4	25	27	90	33	0	90	33	17	+0	17
	15	10	45	24	2	10	15	5	9	18	107	29	0	107	30	1	+1	1
	16	11	46	54	2	11	11	5	22	53	123	53	15	123	54	45	+1	30
	18	13	38	39	2	13	3	6	19	5	153	52	20	153	53	20	+1	0
	19	14	26	19	2	13	59	7	1	40	166	48	30	166	48	40	+0	10
::	20	15	10	40	2	14	54	7	13	54	178	54	45	178	52	35	−2	10
	23	17	15	16	2	17	40	8	19	10	213	6	20	213	2	43	−3	37
	24	17	57	58	2	18	36	9	0	37	224	47	30	224	43	3	−4	27
::	27	20	20	20	2	21	22	10	4	53	263	26	30	263	23	3	−3	27
Jan.	28	21	12	52	2	22	18	10	16	28	277	35	45	277	31	26	−4	19
Feb.	5	3	2	47	2	28	46	1	13	53	12	12	50	12	12	33	−0	17
::	6	3	50	48	2	29	42	1	27	26	25	14	0	25	15	0	+1	0
	7	4	41	7	3	0	37	2	11	10	38	50	0	38	50	33	+0	33
	9	6	31	55	3	2	28	3	8	59	68	35	0	68	34	14	−0	46
	11	8	34	10	3	4	19	4	6	37	101	12	0	101	10	48	−1	12
	13	10	32	27	3	6	11	5	3	22	132	49	25	132	50	10	+0	45
Cent.	14	11	26	54	3	7	6	5	16	16	147	27	30	147	28	38	+1	8
Cent.	16	13	1	28	3	8	56	6	11	5	173	8	0	173	7	52	−0	8
	17	13	45	37	3	9	51	6	23	4	185	11	20	185	10	28	−0	52
	18	14	27	26	3	10	46	7	4	48	196	39	30	196	37	42	−1	48
	19	15	9	6	3	11	40	7	16	22	208	5	15	208	2	21	−2	54
	22	17	22	9	3	14	25	8	20	37	244	23	40	244	18	50	−4	50
	23	18	11	3	3	15	20	9	2	5	257	38	30	257	33	56	−4	34
Feb.	24	19	2	14	3	16	15	9	13	40	271	27	30	271	23	50	−3	40
Mart.	10	6	28	19	3	28	7	3	4	56	96	15	50	96	16	15	+0	25
	11	7	29	5	3	29	2	3	18	35	112	29	57	112	28	33	−0	27
	12	8	26	48	3	29	57	4	1	54	127	56	0	127	56	25	+0	25
::	13	9	20	18	4	0	51	4	14	52	142	20	0	142	20	41	+0	41
	14	10	9	41	4	1	46	4	27	27	155	42	0	155	42	11	+0	11

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
Mart.	15	10	55	29	4	2	40	5	9	43	168	10	0	168	10	5	+0	5
Cent.	16	11	39	48	4	3	34	5	21	40	180	15	40	180	15	26	—0	14
Cent.	17	12	21	38	4	4	28	6	3	21	191	44	0	191	42	46	—1	14
	20	14	29	50	4	7	10	7	7	25	226	49	40	226	45	42	—3	58
	23	16	53	30	4	9	52	8	11	21	265	48	0	265	43	8	—4	52
	24	17	45	13	4	10	46	8	22	55	279	45	0	279	40	12	—4	48
Mart.	30	22	45	38	4	16	10	11	8	9	0	58	30	0	57	8	—1	22
Apri.	5	3	17	57	4	20	40	1	18	48	73	47	45	73	52	15	+4	30
	7	5	22	45	4	22	29	2	17	4	107	25	30	107	28	39	+3	9
	9	7	17	31	4	24	16	3	14	0	138	10	0	138	10	46	+0	46
	10	8	7	46	4	25	10	3	26	51	151	45	0	151	45	44	+0	44
	11	8	54	2	4	26	4	4	9	18	164	20	0	164	20	10	+0	10
	12	9	37	21	4	26	57	4	21	23	176	10	30	176	10	27	—0	3
	14	10	59	51	4	28	43	5	14	38	198	49	45	198	48	52	—0	53
Cent.	16	12	25	5	5	0	30	6	7	5	222	10	0	222	6	8	—3	52
Cent.	17	13	9	51	5	1	23	6	18	10	234	22	30	234	16	56	—5	34
Maii.	5	4	12	41	5	16	30	1	28	49	117	27	30	117	32	12	+4	42
	8	6	52	30	5	19	9	3	8	48	160	28	40	160	30	15	+1	35
::	9	7	36	50	5	20	2	3	21	14	172	34	30	272	35	31	+1	1
	10	8	18	45	5	20	55	4	3	17	184	4	20	184	4	44	+0	24
	12	9	40	24	5	22	40	4	26	26	206	30	45	206	30	30	—0	15
	13	10	22	19	5	23	32	5	7	39	218	0	20	217	59	28	—0	52
Cent.	15	11	53	28	5	25	18	5	29	46	242	49	30	242	46	0	—3	30
Cent.	16	12	42	7	5	26	11	6	10	48	256	0	30	255	56	29	—4	1
Maii.	20	16	6	53	5	29	42	7	26	5	311	17	0	311	11	35	—5	25
Junii.	2	2	57	36	6	10	16	1	10	6	126	14	0	126	17	54	+3	54
::	4	4	46	38	6	12	1	2	7	21	155	32	20	155	35	26	+3	6
	5	5	33	29	6	12	54	2	20	16	168	16	0	168	18	13	+2	13
	9	8	21	7	6	16	24	4	8	9	214	14	0	214	13	55	—0	5
	11	9	49	33	6	18	9	5	0	35	238	22	30	238	21	43	—0	47
	12	10	37	27	6	21	39	5	11	40	251	22	0	251	21	22	—0	38
Sect.::	16	14	1	47	6	22	32	6	26	32	306	32	0	306	27	39	—4	21
	17	14	52	46	6	23	25	7	8	10	320	18	0	320	12	45	—5	15
	20	17	8	54	6	26	2	8	14	54	357	23	0	357	18	28	—4	32

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno Juliano MDCCXXV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia* ☾ *à* ☉			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	'	''	S.	o.	'	S.	o.	'	o.	'	''	o.	'	''	'	''
Junii.	30	1	39	7	7	3	57	0	21	8	134	9	20	134	10	0	+0	40
Julii.	3	4	11	8	7	6	35	2	1	9	175	14	0	175	14	24	+0	24
	6	6	18	16	7	9	13	3	7	42	210	3	0	210	3	8	+0	8
	7	7	1	8	7	10	5	3	19	18	221	47	0	221	46	46	—0	14
	8	7	45	49	7	10	57	4	0	44	233	58	0	233	58	48	+0	48
	10	9	22	26	7	12	43	4	23	16	260	9	30	260	10	20	+0	50
	12	11	7	6	7	14	28	5	15	48	288	22	10	288	20	48	—1	22
	13	11	58	34	7	15	21	5	27	12	302	15	30	302	13	56	—1	34
	16	14	23	19	7	17	59	7	2	33	341	30	0	341	27	0	—3	0
	17	15	7	51	7	18	52	7	14	53	353	39	0	353	36	27	—2	33
	18	15	52	3	7	19	44	7	27	33	05	43	0	05	40	58	—2	2
	19	16	37	9	7	20	37	8	10	34	18	0	30	17	58	41	—1	49
	20	17	24	33	7	21	30	8	23	56	30	52	30	30	50	6	—2	24
	23	20	11	55	7	24	9	10	5	50	75	47	20	75	41	56	—5	24
Julii.	24	21	16	9	7	25	2	10	20	7	92	52	30	92	47	48	—4	42
Aug.	6	7	15	43	8	5	38	3	22	41	255	0	20	254	59	58	—0	22
	8	9	2	0	8	7	25	4	15	33	283	2	20	283	2	56	+0	36
	9	9	50	22	8	8	18	4	27	2	296	44	0	296	44	13	+0	13
	13	13	5	14	8	11	51	6	14	46	349	31	30	349	30	0	—1	30
	14	13	50	10	8	12	44	6	27	20	01	46	30	01	45	0	—1	30
	15	14	34	26	8	13	37	7	10	12	13	51	30	13	49	31	—1	59
	16	15	22	21	8	14	30	7	23	23	26	51	20	26	51	27	+0	6
	17	16	12	11	8	15	24	8	6	52	40	20	0	40	19	38	—0	22
	18	17	5	58	8	16	17	8	20	37	54	48	0	54	46	10	—1	50
	20	19	5	43	8	18	5	9	18	37	86	47	30	86	43	52	—3	38
Aug.	21	20	8	59	8	18	59	10	2	39	103	38	15	103	34	17	—3	58
Cent.	1	4	22	8	8	27	55	2	9	32	236	44	20	236	43	40	—0	40
Cent.	2	5	9	11	8	28	48	2	21	2	249	48	10	249	48	9	—0	1
Sept.	5	7	41	11	9	1	30	3	25	35	290	57	40	290	59	40	+2	0
	7	9	21	55	9	3	18	4	19	7	318	11	0	318	10	11	—0	49
	8	10	9	51	9	4	12	5	1	11	331	11	15	331	9	56	—1	19
	9	10	56	20	9	5	6	5	13	29	343	49	20	343	47	51	—1	29
	11	12	30	11	9	6	53	6	8	58	9	19	20	9	17	51	—1	29
	12	13	17	30	9	7	47	6	22	10	22	10	0	22	9	17	—0	43

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Aſcenſ. Rect. Limbi Lunæ Obſervata.*			*Aſcenſ. Rect. Limbi Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Sept.	13	14	7	25	9	8	41	7	5	39	35	40	0	35	39	40	−0	20
	14	15	0	58	9	9	36	7	19	23	50	4	30	50	4	18	−0	12
	15	15	58	32	9	10	30	8	3	19	65	29	45	65	29	51	+0	6
	16	16	59	39	9	11	25	8	17	20	81	48	0	81	47	37	−0	23
	17	18	2	25	9	12	19	9	1	22	98	31	15	98	29	51	−1	24
Sept. ::	19	20	2	50	9	14	9	9	28	58	130	40	40	130	38	27	−2	13
Octo.	1	4	40	22	9	24	7	2	11	50	271	15	30	271	15	22	−0	8
	2	5	31	50	9	25	1	2	23	17	285	8	30	285	9	22	+0	52
	3	6	22	44	9	25	56	3	4	52	298	53	20	298	54	28	+1	8
	4	7	10	47	9	26	51	3	16	35	312	34	0	312	34	49	+0	49
	5	8	0	16	9	27	45	3	28	34	325	18	50	325	18	21	−0	29
	7	9	32	17	9	29	35	4	23	19	350	21	0	350	19	37	−1	23
	11	12	50	14	10	3	14	6	16	50	43	55	0	43	57	48	+2	48
	15	16	58	8	10	6	56	8	13	26	110	0	15	109	59	19	−0	56
	16	17	58	27	10	7	51	8	27	21	126	6	40	126	4	25	−2	15
	19	20	31	23	10	10	36	10	7	0	167	24	30	167	22	20	−2	10
	30	4	15	8	10	19	48	2	2	28	293	31	0	293	32	46	+1	46
Octo.	31	5	4	37	10	20	43	2	13	55	306	54	30	306	56	17	+1	47
Nov.	1	5	52	15	10	21	39	2	25	34	319	50	0	319	52	17	+2	17
	2	6	28	8	10	22	34	3	7	29	332	19	20	332	21	7	+1	47
	3	7	22	45	10	23	29	3	19	43	344	29	30	344	30	11	+0	41
	4	8	7	4	10	24	25	4	2	19	356	35	20	356	36	6	+0	46
::	5	8	52	23	10	25	20	4	15	17	8	56	0	8	54	35	−1	25
	6	9	40	0	10	26	16	4	28	41	21	51	0	21	49	30	−1	30
	9	12	31	53	10	29	3	6	10	58	67	54	0	67	51	49	−2	11
	10	13	37	39	11	0	0	6	25	28	85	22	30	85	21	55	−0	35
	11	14	45	35	11	0	56	7	9	59	103	8	20	103	8	20	−0	0
	12	15	48	53	11	1	52	7	24	18	120	14	30	120	12	55	−1	35
	16	19	14	50	11	5	35	9	17	59	175	49	0	175	44	34	−4	26
	17	19	57	36	11	6	31	10	0	22	187	31	20	187	27	19	−4	1
Nov.	19	21	21	55	11	8	22	10	24	5	210	38	15	210	35	20	−2	55
Dec.	2	6	0	9	11	18	35	2	28	44	351	23	0	351	26	44	+3	44
	3	7	28	2	11	20	27	3	24	12	15	23	15	15	25	4	+1	49
	4	8	15	42	11	21	23	4	7	35	28	19	15	28	20	48	+1	33

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
Dec.	5	9	8	5	11	22	19	4	21	24	♉ 15	42	26	♉ 15	42	34	+0	8
	6	10	6	14	11	23	15	5	5	36	♊ 1	5	14	♊ 1	4	26	−0	48
	7	11	10	12	11	24	11	5	20	6	♊ 16	54	4	♊ 16	53	17	−0	47
Cent.	8	12	19	26	11	25	8	6	4	46	♋ 2	58	38	♋ 2	58	3	−0	35
	9	13	28	47	11	26	5	6	19	26	♋ 19	2	55	♋ 19	2	7	−0	48
	10	14	32	56	11	27	1	7	3	54	♌ 4	49	34	♌ 4	48	46	−0	48
	11	15	31	12	11	27	58	7	18	3	♌ 20	8	31	♌ 20	7	9	−1	22
Dec.	31	6	7	41	0	15	39	3	3	42	♈ 24	58	41	♈ 24	59	8	+0	27

Anno JULIANO MDCCXXVI. Currente.

M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
Jan.	3	8	47	55	0	18	28	4	14	50	♊ 8	37	12	♊ 8	37	46	+0	34
	4	9	52	32	0	19	24	4	29	14	♊ 24	12	6	♊ 24	11	52	−0	14
	5	11	0	12	0	20	21	5	13	50	♋ 10	6	37	♋ 10	6	17	−0	20
Cent.	6	12	8	23	0	21	17	5	28	25	♋ 26	7	46	♋ 26	7	30	−0	16
	7	13	12	15	0	22	14	6	12	52	♌ 11	58	57	♌ 11	59	3	+0	6
	8	14	9	8	0	23	10	6	27	0	♌ 27	26	57	♌ 27	26	58	+0	1
	9	15	0	42	0	24	6	7	10	47	♍ 12	25	5	♍ 12	23	40	−1	25
::	10	15	48	8	0	25	2	7	24	8	♍ 26	48	0	♍ 26	45	41	−2	19
::	13	18	0	45	0	27	48	9	1	48	♏ 6	54	53	♏ 6	47	46	−7	7
::	14	18	45	43	0	28	43	9	13	38	♏ 19	31	7	♏ 19	25	0	−6	7
	25	2	39	35	1	8	1	1	6	52	♓ 24	10	39	♓ 24	10	4	−0	35
	28	4	51	15	1	10	47	2	14	15	♉ 4	13	30	♉ 4	15	55	+2	25
	30	6	35	54	1	12	38	3	11	7	♊ 2	35	5	♊ 2	37	0	+1	55
Cent. ::	31	7	40	14	1	13	34	3	25	7	♊ 17	23	54	♊ 17	26	18	+2	24
Feb.	1	8	40	12	1	14	30	4	9	18	♋ 2	34	34	♋ 2	34	38	+0	4
	3	10	49	22	1	16	22	5	7	58	♌ 3	40	1	♌ 3	39	10	−0	51
Cent.	5	12	44	12	1	18	13	6	6	6	♍ 4	28	46	♍ 4	29	8	+0	22
	6	13	35	29	1	19	9	6	19	43	♍ 19	23	58	♍ 19	23	39	−0	19
	9	15	53	14	1	21	54	7	28	24	♏ 1	17	43	♏ 1	12	13	−5	30
	11	17	26	0	1	23	45	8	22	33	♏ 27	4	29	♏ 26	58	22	−6	7
	12	18	13	41	1	24	40	9	4	14	♐ 9	33	4	♐ 9	27	7	−5	57
	24	2	49	25	2	4	44	1	12	43	♉ 0	3	56	♉ 0	4	4	+0	8
	25	3	38	10	2	5	39	1	25	42	♉ 13	59	15	♉ 13	59	53	+0	38

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVI. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
Feb.	26	4	31	8	2	6	34	2	9	2	♉28	9	49	♉28	10	56	+1	7
	27	5	28	45	2	7	29	2	22	41	♊12	36	25	♊12	37	12	+0	47
Feb.	28	6	30	12	2	8	25	3	6	35	♊27	18	11	♊27	18	17	+0	6
Mart.	1	7	37	49	2	9	20	3	20	41	♋12	15	8	♋12	14	24	—0	44
	2	8	35	58	2	10	15	4	4	44	♋27	15	44	♋27	14	11	—1	33
	4	10	30	5	2	12	5	5	2	35	♌27	19	29	♌27	17	58	—1	31
	5	11	21	5	2	13	0	5	16	11	♍12	9	1	♍12	7	20	—1	41
Cent.	6	12	10	8	2	13	55	5	29	29	♍26	42	2	♍26	41	22	—0	40
	9	14	29	11	2	16	38	7	7	31	♏ 8	16	16	♏ 8	12	48	—3	28
	10	15	16	31	2	17	32	7	19	37	♏21	23	0	♏21	19	28	—3	32
	12	16	56	19	2	19	21	8	13	13	♐16	46	50	♐16	42	32	—4	18
	26	3	23	7	3	1	5	1	21	12	♊ 8	8	15	♊ 8	9	6	+0	51
	27	4	24	12	3	1	59	2	5	2	♊22	53	48	♊22	54	32	+0	44
Mart.	30	7	28	36	3	4	43	3	16	58	♌ 7	16	56	♌ 7	19	9	+2	13
Apri.	5	12	20	22	3	10	6	6	5	30	♏ 2	15	5	♏ 2	13	9	—1	56
	6	13	7	11	3	11	0	6	17	36	♏15	32	58	♏15	30	17	—2	41
	7	13	55	52	3	11	53	6	29	29	♏28	35	20	♏28	32	0	—3	20
	8	14	46	28	3	12	47	7	11	11	♐11	23	35	♐11	19	22	—4	13
	9	15	38	18	3	13	40	7	22	46	♐23	58	5	♐23	54	42	—3	23
Apri.	16	21	9	52	3	19	55	10	14	19	♓21	33	56	♓21	33	36	—0	20
Maii.	9	16	4	15	4	9	26	7	25	54	♑26	11	7	♑26	8	28	—2	39
	13	19	3	0	4	12	57	9	12	17	♓15	49	27	♓15	48	21	—1	6
	14	19	45	2	4	13	50	9	24	28	♓28	47	4	♓28	45	14	—1	50
	16	21	13	54	4	15	35	10	19	55	♈25	56	52	♈25	55	50	—1	2
	17	22	3	37	4	16	28	11	3	12	♉10	17	26	♉10	16	31	—0	55
	27	6	43	51	4	24	25	3	9	32	♍25	59	46	♍25	59	29	—0	17
	29	8	12	0	4	26	10	4	5	4	♎23	3	18	♎23	2	30	—0	48
Maii.	30	8	56	34	4	27	3	4	17	17	♏ 6	10	46	♏ 6	10	1	—0	45
Junii.	1	10	31	10	4	28	48	5	10	50	♐ 1	52	22	♐ 1	51	31	—0	51
	2	11	21	39	4	29	41	5	22	16	♐14	30	10	♐14	29	14	—0	56
	6	14	46	24	5	3	11	7	6	59	♒ 4	3	22	♒ 4	0	23	—2	59
	7	15	33	34	5	4	4	7	18	13	♒16	18	45	♒16	15	48	—2	57
	8	16	17	11	5	4	56	7	29	34	♒28	35	20	♒28	32	32	—2	48
	9	16	59	0	5	5	48	8	11	8	♓10	58	8	♓10	56	11	—1	57

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVI. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
Junii.	10	17	40	5	5	6	41	8	22	57	♓23	32	52	♓23	30	35	−2	17
	11	18	21	23	5	7	33	9	5	6	♈ 6	25	18	♈ 6	22	23	−2	55
	12	19	4	45	5	8	26	9	17	39	♈19	40	46	♈19	37	58	−2	48
	15	21	39	38	5	11	4	10	27	54	♊ 2	38	17	♊ 2	34	0	−4	17
	21	2	57	37	5	15	29	1	10	25	♌21	15	31	♌21	18	55	+3	24
	22	3	50	53	5	16	22	1	24	36	♍ 6	24	16	♍ 6	27	31	+3	15
	25	6	10	21	5	18	59	3	4	48	♎18	51	22	♎18	52	11	−0	49
	29	9	17	58	5	22	29	4	23	2	♐10	30	41	♐10	32	1	+1	20
Junii.	30	10	9	15	5	23	22	5	4	24	♐22	59	14	♐23	0	58	+1	44
Julii.	1	11	1	15	5	24	14	5	15	36	♑ 5	23	28	♑ 5	24	41	+1	13
	2	11	52	31	5	25	7	5	26	42	♑17	42	39	♑17	44	26	+1	47
Cent.	3	12	43	4	5	26	0	6	7	43	♒ 0	0	32	♒ 0	0	16	−0	16
::	5	14	15	20	5	27	45	6	29	53	♒24	32	2	♒24	30	37	−1	25
	6	14	57	28	5	28	37	7	11	8	♓ 6	50	56	♓ 6	49	2	−1	54
	7	15	38	19	5	29	30	7	22	36	♓19	16	6	♓19	13	53	−2	13
	8	16	18	55	6	0	22	8	4	21	♈ 1	52	0	♈ 1	49	20	−2	40
	10	17	44	7	6	2	7	8	28	56	♈27	53	49	♈27	51	48	−2	1
	12	19	24	28	6	3	52	9	25	16	♉25	44	29	♉25	39	41	−4	48
	15	22	34	10	6	6	32	11	7	53	♋11	30	25	♋11	25	19	−5	6
Julii.	25	6	24	40	6	14	28	3	11	12	♏23	43	3	♏23	44	15	+1	12
Cent.	1	12	12	49	6	20	39	6	0	40	♒20	35	21	♒20	35	47	+0	26
Aug.	2	12	56	45	6	21	32	6	11	48	♓ 2	56	26	♓ 2	56	7	−0	19
	3	13	38	2	6	22	24	6	23	4	♓15	22	4	♓15	21	8	−0	56
	4	14	18	35	6	23	17	7	4	32	♓27	55	2	♓27	53	56	−1	6
	5	14	59	30	6	24	10	7	16	17	♈10	38	56	♈10	37	38	−1	18
	6	15	41	56	6	25	3	7	28	22	♈23	36	9	♈23	35	27	−0	42
	7	16	27	16	6	25	56	8	10	50	♉ 6	52	13	♉ 6	51	20	−0	53
	8	17	16	46	6	26	49	8	23	44	♉20	31	48	♉20	29	26	−2	22
	9	18	11	30	6	27	42	9	7	3	♊ 4	37	55	♊ 4	33	45	−4	10
	11	20	15	14	6	29	29	10	4	55	♋ 4	13	37	♋ 4	7	20	−6	17
	12	21	20	21	7	0	23	10	19	17	♋19	39	16	♋19	31	45	−7	31
	13	22	23	26	7	1	17	11	3	46	♌ 5	17	55	♌ 5	11	18	−6	37
Aug.	19	2	41	41	7	5	44	1	13	48	♎21	8	29	♎21	7	26	−1	3
	20	3	29	6	7	6	37	1	26	50	♏ 5	4	58	♏ 5	4	15	+0	43

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVI. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Aug.	22	5	7	25	7	8	24	2	21	50	♐ 1	40	31	♐ 1	41	0	+0	29
	23	5	58	51	7	9	18	3	3	51	♐14	28	20	♐14	29	11	+0	51
	24	6	51	7	7	10	11	3	15	35	♐27	1	47	♐27	3	18	+1	31
	25	7	43	12	7	11	5	3	27	6	♑ 9	24	54	♑ 9	27	42	+2	48
	26	8	34	1	7	11	59	4	8	27	♑21	43	22	♑21	46	16	+2	54
	27	9	22	40	7	12	52	4	19	41	♒ 4	0	3	♒ 4	2	43	+2	40
	28	10	8	50	7	13	46	5	0	52	♒16	18	6	♒16	20	6	+2	0
Aug.	29	10	52	36	7	14	39	5	12	4	♒28	39	43	♒28	41	14	+1	31
Cent.	31	12	16	43	7	16	26	6	4	45	♓23	45	49	♓23	45	44	—0	5
Cent.	1	12	56	46	7	17	19	6	16	22	♈ 6	32	40	♈ 6	32	33	—0	7
Sept.	2	13	41	0	7	18	13	6	28	16	♈19	33	27	♈19	33	42	+0	15
	3	14	25	41	7	19	6	7	10	28	♉ 2	49	17	♉ 2	48	41	—0	36
	4	15	13	50	7	20	0	7	23	2	♉16	21	20	♉16	20	13	—1	7
	6	17	3	32	7	21	48	8	19	17	♊14	20	16	♊14	18	40	—1	36
	7	18	4	37	7	22	42	9	2	58	♊28	49	41	♊28	47	6	—2	35
	10	21	8	24	7	25	26	10	15	15	♌13	48	56	♌13	46	19	—2	37
	17	2	6	28	8	0	50	1	6	44	♏12	17	6	♏12	15	57	—1	9
	24	8	3	40	8	7	11	3	29	44	♒11	32	26	♒11	34	14	+1	48
	25	8	48	12	8	8	5	4	11	5	♒23	50	42	♒23	52	26	+1	44
	27	10	12	9	8	9	54	5	3	58	♓18	50	55	♓18	52	20	+1	25
	28	10	53	27	8	10	48	5	15	37	♈ 1	40	32	♈ 1	41	1	+0	29
Sept.	30	12	21	6	8	12	36	6	9	40	♈28	8	50	♈28	8	14	—0	36
Octo.	1	13	9	54	8	13	31	6	22	8	♉11	49	19	♉11	48	56	—0	23
	2	14	1	54	8	14	26	7	4	56	♉25	47	34	♉25	46	40	—0	54
	3	14	58	24	8	15	21	7	18	5	♊10	1	6	♊10	0	18	—0	48
	4	15	58	48	8	16	16	8	1	32	♊24	28	43	♊24	27	15	—1	28
	5	17	1	1	8	17	11	8	15	16	♋ 9	6	30	♋ 9	4	9	—2	21
	6	18	2	27	8	18	6	8	29	10	♒23	50	27	♋23	47	12	—3	15
	7	19	0	56	8	19	1	9	13	7	♌ 8	37	38	♌ 8	33	6	—4	32
	10	21	35	3	8	21	46	10	24	32	♍22	46	25	♍22	43	8	—3	17
	20	5	8	30	9	0	1	2	15	52	♑24	11	20	♑24	13	3	+1	43
	21	5	56	42	9	0	56	2	27	19	♒ 6	28	32	♒ 6	30	27	+1	55
	25	8	47	23	9	4	36	4	13	26	♓26	2	15	♓26	3	23	+1	8
Octo.	31	13	49	44	9	10	9	6	29	28	♊19	22	17	♊19	20	37	—1	40

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVI. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
Nov.	1	14	53	11	9	11	4	7	13	13	♋ 4	18	39	♋ 4	16	55	−1	44
	2	15	56	18	9	12	0	7	27	8	♋19	17	43	♋19	15	33	−2	10
	3	16	56	23	9	12	56	8	11	7	♌ 4	12	40	♌ 4	9	51	−2	49
	17	3	49	12	9	25	0	1	24	35	♒ 1	25	1	♒ 1	27	4	+2	3
	20	6	0	42	9	27	47	2	28	39	♓ 8	4	13	♓ 8	6	48	+2	35
	22	7	21	31	9	29	37	3	22	0	♈ 2	59	48	♈ 3	01	52	+2	4
	23	8	3	18	10	0	33	4	4	4	♈15	55	36	♈15	56	51	+1	15
	25	9	36	30	10	2	24	4	29	13	♉13	8	15	♉13	8	22	+0	7
Nov.	27	11	31	37	10	4	17	5	25	52	♊12	26	0	♊12	23	33	−2	27
Dec.	2	16	39	50	10	8	59	8	6	19	♌28	57	3	♌28	53	7	−3	56
	3	17	29	40	10	9	54	8	20	12	♍13	38	11	♍13	32	41	−5	30
	6	19	47	37	10	12	42	10	0	1	♎25	44	11	♎25	38	36	−5	35
	17	3	56	48	10	22	2	1	25	56	♓ 3	20	7	♓ 3	21	39	+1	32
	18	4	37	0	10	22	57	2	7	13	♓15	29	37	♓15	31	50	+2	13
	23	8	14	0	10	27	36	4	7	50	♉20	9	26	♉20	9	55	+0	29
	25	10	11	45	10	29	29	5	4	52	♊19	33	14	♊19	30	52	−2	22
	26	11	17	37	11	0	25	5	18	59	♋ 5	1	24	♋ 4	59	8	−2	16
Cent.	27	12	25	22	11	1	22	6	3	21	♋20	49	27	♋20	47	15	−2	12
	29	14	28	38	11	3	15	7	2	17	♌22	25	29	♌22	23	16	−2	13
	30	15	22	13	11	4	11	7	16	35	♍ 7	50	4	♍ 7	46	59	−3	5
Dec.	31	16	11	52	11	5	7	8	0	39	♍22	49	36	♍22	45	19	−4	17

Anno JULIANO MDCCXXVII. Currente.

M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
Jan.	1	16	59	8	11	6	3	8	14	22	♎ 7	22	0	♎ 7	16	23	−5	37
	2	17	45	33	11	6	59	8	27	44	♎21	28	33	♎21	21	40	−6	53
	5	20	10	57	11	9	47	10	5	30	♐ 1	42	38	♐ 1	37	29	−5	9
	16	3	54	2	11	19	4	1	27	54	♈ 5	43	21	♈ 5	44	17	+0	56
	18	5	17	4	11	20	55	2	21	32	♉ 0	57	21	♉ 0	59	43	+2	22
	20	6	54	58	11	22	46	3	16	45	♉27	46	48	♉27	47	40	+0	52
Cent.	25	12	7	43	11	27	27	5	27	1	♌13	51	29	♌13	49	12	−2	17
	26	13	6	15	11	28	23	6	11	36	♌29	46	48	♌29	46	20	−0	28
Jan.	29	15	38	6	0	1	10	7	24	7	♎15	39	1	♎15	36	20	−2	41
Feb.	1	18	6	30	0	3	57	9	3	24	♏27	24	46	♏27	19	0	−5	46

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno Juliano MDCCXXVII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
Feb.	15	3	59	39	0	15	54	2	1	38	♉ 9	37	36	♉ 9	37	21	−0	15
	17	5	41	30	0	17	44	2	26	46	♊ 6	25	30	♊ 6	25	7	−0	23
	18	6	39	41	0	18	40	3	10	1	♊ 20	29	15	♊ 20	28	30	−0	45
	20	8	44	40	0	20	31	4	7	44	♋ 20	4	1	♋ 20	1	24	−2	37
::::	24	12	34	3	0	24	12	6	5	24	♍ 22	28	28	♍ 22	30	31	+2	3
	27	15	4	52	0	26	56	7	17	3	♏ 7	35	39	♏ 7	34	38	−1	1
Feb.	28	15	56	50	0	27	51	8	0	13	♏ 21	44	15	♏ 21	42	13	−2	2
Mart.	1	16	50	16	0	28	46	8	13	1	♐ 5	24	7	♐ 5	22	21	−1	46
	2	17	44	49	0	29	41	8	25	26	♐ 18	41	5	♐ 18	37	37	−3	28
	7	21	53	37	1	4	15	10	23	8	♒ 20	59	45	♒ 20	58	23	−1	22
	14	1	58	10	1	9	39	1	0	47	♉ 5	37	48	♉ 5	34	45	−3	3
	15	2	45	29	1	10	34	1	12	50	♉ 18	45	15	♉ 18	42	46	−2	29
	16	3	39	34	1	11	28	1	25	16	♊ 2	11	22	♊ 2	9	50	−1	32
	17	4	33	5	1	12	22	2	8	5	♊ 15	54	56	♊ 15	53	25	−1	31
	18	5	32	31	1	13	17	2	21	18	♊ 29	59	23	♊ 29	57	56	−1	27
	19	6	33	33	1	14	12	3	4	54	♋ 14	24	36	♋ 14	22	20	−2	16
	20	7	33	44	1	15	6	3	18	48	♋ 29	7	54	♋ 29	5	4	−2	50
	21	8	31	24	1	16	1	4	2	55	♌ 14	7	14	♌ 14	4	16	−2	58
	23	10	17	43	1	17	50	5	1	23	♍ 14	35	40	♍ 14	33	44	−1	56
	25	11	57	30	1	19	38	5	29	31	♎ 15	5	4	♎ 15	5	3	−0	1
Mart.	27	13	42	29	1	21	26	6	26	42	♍ 14	42	44	♍ 14	43	10	+0	26
Apri.	3	19	49	54	1	27	44	9	21	58	♒ 16	29	28	♒ 16	27	9	−2	19
	5	21	13	13	1	29	31	10	14	31	♓ 10	49	10	♓ 10	47	45	−1	25
	7	22	32	45	2	1	18	11	7	9	♈ 5	32	5	♈ 5	29	58	−2	7
	12	1	32	44	2	4	52	0	24	40	♉ 27	51	3	♉ 27	47	46	−3	17
	27	15	11	4	2	18	15	7	14	56	♑ 3	23	38	♑ 3	23	57	+0	19
	28	16	5	28	2	19	8	7	26	57	♑ 16	24	51	♑ 16	24	25	−0	26
	29	16	56	34	2	20	1	8	8	45	♑ 29	6	54	♑ 29	5	54	−1	0
Apri.	30	17	43	53	2	20	54	8	20	21	♒ 11	32	36	♒ 11	30	53	−1	43
Maii.	6	21	51	17	2	26	11	10	29	33	♈ 25	49	5	♈ 25	46	17	−2	48
	7	22	36	55	2	27	4	11	11	36	♉ 8	59	17	♉ 8	56	55	−2	22
	12	2	20	13	3	0	37	1	2	57	♋ 5	17	25	♋ 5	16	26	−0	59
	13	3	21	43	3	1	30	1	16	33	♋ 19	58	41	♋ 19	58	29	−0	12
	14	4	20	36	3	2	23	2	0	21	♌ 4	42	52	♌ 4	43	28	+0	36

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	'	''	S.	o.	'	S.	o.	'	o.	'	''	o.	'	''	'	''
Maii.	15	5	15	42	3	3	16	2	14	16	♌ 19	26	50	♌ 19	26	49	−0	1
	16	6	7	4	3	4	9	2	28	13	♍ 4	6	35	♍ 4	6	19	−0	16
	18	7	42	56	3	5	56	3	25	52	♎ 3	12	52	♎ 3	11	31	−1	21
	19	8	30	11	3	6	47	4	9	29	♎ 17	38	21	♎ 17	37	2	−1	19
Cent.	20	9	23	10	3	7	40	4	22	58	♏ 2	0	40	♏ 1	59	47	−0	53
	21	10	9	43	3	8	33	5	5	58	♏ 16	10	8	♏ 16	9	54	−0	14
::	22	11	3	24	3	9	26	5	18	47	♐ 0	11	58	♐ 0	12	29	+0	31
	26	14	47	22	3	12	58	7	7	27	♑ 23	45	53	♑ 23	44	48	−1	5
Maii.	30	17	44	45	3	16	28	8	23	18	♓ 13	9	11	♓ 13	6	28	−2	43
Junii.	1	19	3	25	3	18	12	9	16	21	♈ 7	38	2	♈ 7	35	42	−2	20
	2	19	44	21	3	19	5	9	28	7	♈ 20	11	43	♈ 20	9	11	−2	32
	3	20	28	4	3	19	57	10	10	9	♉ 3	5	37	♉ 3	3	12	−2	25
	12	4	3	14	3	27	0	1	27	24	♌ 29	25	50	♌ 29	28	6	+2	16
	13	4	53	22	3	27	53	2	11	28	♍ 14	16	03	♍ 14	18	22	+2	19
	14	5	41	9	3	28	45	2	25	24	♍ 28	53	11	♍ 28	55	20	+2	9
	17	8	5	6	4	1	23	4	5	47	♏ 11	31	55	♏ 11	33	12	+1	17
	18	8	56	55	4	2	15	4	18	38	♏ 25	22	33	♏ 25	23	26	+0	53
Cent.::	19	9	52	20	4	3	8	5	1	12	♐ 9	0	33	♐ 9	3	0	+2	27
	20	10	47	9	4	4	1	5	13	27	♐ 22	30	22	♐ 22	30	54	+0	32
	21	11	43	0	4	4	54	5	25	25	♑ 5	43	24	♑ 5	44	23	+0	59
	24	14	16	46	4	7	31	7	0	1	♒ 13	57	16	♒ 13	55	46	−1	30
	29	17	39	0	4	11	53	8	26	43	♈ 14	58	17	♈ 14	55	36	−2	41
Junii.	30	18	20	37	4	12	45	9	8	31	♈ 27	30	9	♈ 27	27	39	−2	30
Julii.	1	19	5	42	4	13	38	9	20	38	♉ 10	24	15	♉ 10	20	56	−3	19
	2	19	55	23	4	14	30	10	3	7	♉ 23	45	38	♉ 23	42	21	−3	17
	11	3	36	34	4	21	34	1	24	10	♍ 23	45	27	♍ 23	48	29	+3	2
Cent.	14	6	3	27	4	24	12	3	5	31	♏ 7	19	52	♏ 7	22	48	+2	56
	19	10	31	18	4	28	37	5	7	38	♑ 14	17	52	♑ 14	21	26	+3	34
	20	11	22	37	4	29	29	5	19	7	♑ 27	0	15	♑ 27	3	12	+2	57
	21	12	12	50	5	0	22	6	0	25	♒ 9	31	35	♒ 9	33	53	+2	18
	23	13	39	0	5	2	7	6	22	36	♓ 4	3	33	♓ 4	3	44	+0	11
	24	14	18	45	5	3	0	7	3	39	♓ 16	11	57	♓ 16	10	0	−1	57
	26	15	36	25	5	4	45	7	26	0	♈ 10	27	18	♈ 10	24	12	−3	6
	27	16	16	38	5	5	37	8	7	27	♈ 22	44	8	♈ 22	41	31	−2	37

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVII. Currente.

Tranſitûs Limbi Lunæ T. æq.					Argument. Annuum.			Diſtantia ☾ à ☉			Longitudo Centri Lunæ Obſervata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
	28	16	59	26	5	6	30	8	19	12	♉ 5	15	38	♉ 5	12	49	−2	49
Julii.	31	19	33	41	5	9	9	9	26	41	♊ 15	13	24	♊ 15	7	22	−6	2
Aug.	1	20	34	23	5	10	3	10	10	4	♊ 29	33	45	♊ 29	27	12	−6	33
	3	22	39	34	5	11	50	11	7	59	♋ 29	43	46	♋ 29	38	5	−5	41
	8	2	16	7	5	15	23	1	5	51	♎ 2	14	19	♎ 2	15	23	+1	4
::::	9	3	8	50	5	16	16	1	20	6	♎ 17	25	20	♎ 17	28	32	+3	12
	10	3	56	20	5	17	9	2	4	0	♏ 2	10	46	♏ 2	14	20	+3	34
	11	4	48	14	5	18	2	2	17	34	♏ 16	33	19	♏ 16	36	41	+3	22
	12	5	42	0	5	18	56	3	0	45	♐ 0	31	30	♐ 0	34	31	+3	1
	13	6	37	11	5	19	49	3	13	32	♐ 14	6	29	♐ 14	9	54	+3	25
	14	7	32	49	5	20	43	3	25	55	♐ 27	21	3	♐ 27	25	3	+4	0
	16	9	19	24	5	22	29	4	19	36	♑ 22	59	50	♑ 23	4	25	+4	35
	17	10	8	11	5	23	23	5	1	0	♒ 5	29	43	♒ 5	33	31	+3	48
	18	10	53	32	5	24	16	5	12	10	♒ 17	49	8	♒ 17	52	15	+3	7
	19	11	35	56	5	25	9	5	25	51	♓ 0	1	35	♓ 0	3	27	+1	52
	20	12	18	10	5	26	2	6	4	9	♓ 12	9	55	♓ 12	11	9	+1	14
	22	13	35	54	5	27	48	6	26	6	♈ 6	25	23	♈ 6	23	41	−1	42
	23	14	15	31	5	28	42	7	7	15	♈ 18	38	58	♈ 18	36	40	−2	18
	24	14	57	5	5	29	35	7	18	37	♉ 1	1	31	♉ 0	58	43	−2	48
	25	15	41	38	6	0	28	8	0	17	♉ 13	36	40	♉ 13	34	0	−2	40
	26	16	30	12	6	1	22	8	12	18	♉ 26	30	2	♉ 26	26	51	−3	11
Aug.	30	20	21	30	6	4	57	10	4	36	♋ 22	14	57	♋ 22	8	19	−6	38
Sept.	1	22	17	41	6	6	45	11	3	1	♌ 22	45	50	♌ 22	39	16	−6	34
	8	3	32	6	6	12	9	1	28	27	♏ 24	54	15	♏ 24	56	2	+1	47
	9	4	28	36	6	13	3	2	11	42	♐ 9	2	36	♐ 9	4	55	+2	19
	11	6	21	47	6	14	52	3	6	59	♑ 5	59	1	♑ 6	1	53	+2	52
	12	7	15	16	6	15	46	3	19	2	♑ 18	51	57	♑ 18	55	10	+3	13
	14	8	51	39	6	17	34	4	2	9	♒ 13	48	40	♒ 13	52	3	+3	23
	15	9	34	49	6	18	28	4	23	21	♒ 26	1	8	♒ 26	4	27	+3	19
	16	10	15	34	6	19	22	5	4	24	♓ 8	8	41	♓ 8	11	48	+3	7
Cent.	18	11	34	42	6	21	9	5	26	21	♈ 2	25	41	♈ 2	26	41	+1	0
::	20	12	56	14	6	22	57	6	18	34	♈ 27	4	34	♈ 27	3	25	−1	9
	21	13	39	56	6	23	51	6	29	58	♉ 9	38	20	♉ 9	36	50	−1	30
	22	14	27	11	6	24	46	7	11	38	♉ 22	26	5	♉ 22	23	57	−2	8

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Sept.	23	15	18	30	6	25	40	7	23	39	♊ 5	29	39	♊ 5	26	57	—2	42
	24	16	13	32	6	26	35	8	6	2	♊18	49	58	♊18	47	39	—2	19
	25	17	11	28	6	27	29	8	18	50	♋ 2	30	58	♋ 2	27	56	—3	2
::	26	18	10	22	6	28	24	9	2	2	♋16	31	56	♋16	28	47	—3	9
Sept.	27	19	8	15	6	29	19	9	15	37	♌ 0	54	54	♌ 0	50	50	—4	4
Octo. ::	1	22	39	30	7	2	58	11	12	19	♎ 1	30	48	♎ 1	27	34	—3	14
	8	4	11	0	7	8	27	2	4	21	♑ 0	32	44	♑ 0	34	37	+1	53
	10	5	59	24	7	10	17	2	29	3	♑26	48	34	♑26	50	9	+1	35
	12	7	32	8	7	12	7	3	22	11	♒21	42	34	♒21	43	15	+0	41
	13	8	13	40	7	13	1	4	3	29	♓ 3	51	18	♓ 3	53	11	+1	53
::	14	8	53	25	7	13	56	4	14	40	♓15	58	22	♓15	59	42	+1	20
	17	10	52	10	7	16	40	5	18	6	♈22	44	51	♈22	44	37	—0	14
	20	13	14	34	7	19	25	6	22	51	♊ 1	20	49	♊ 1	18	53	—1	56
	21	14	9	5	7	20	20	7	5	0	♊14	43	52	♊14	41	21	—2	31
::	22	15	6	19	7	21	16	7	17	30	♊28	19	19	♊28	18	53	—0	26
	26	18	49	48	7	24	58	9	10	45	♌25	1	48	♌24	58	27	—3	21
	27	19	39	55	7	25	53	9	24	40	♍ 9	43	17	♍ 9	39	6	—4	11
Octo.	29	21	18	1	7	27	44	10	22	46	♎ 9	39	27	♎ 9	35	22	—4	5
Nov.	8	5	26	32	8	6	5	2	19	32	♒16	44	52	♒16	45	26	+0	34
	12	8	8	0	8	9	46	4	5	4	♈ 5	29	50	♈ 5	29	14	—0	36
	13	8	47	54	8	10	41	4	16	25	♈17	48	7	♈17	49	30	+1	23
	14	9	30	2	8	11	36	4	27	51	♉ 0	19	34	♉ 0	20	18	+0	44
	15	10	15	25	8	12	32	5	9	28	♉13	10	18	♉13	9	23	—0	55
	16	11	4	54	8	13	28	5	21	19	♉26	18	39	♉26	18	58	+0	19
	17	12	1	22	8	14	24	6	3	27	♊ 9	50	40	♊ 9	48	7	—2	33
Nov.	22	16	46	40	8	19	4	8	8	33	♌20	39	55	♌20	38	24	—1	31
Dec.	5	3	18	18	9	0	16	1	16	15	♒11	14	6	♒11	13	18	—0	48
	6	4	3	20	9	1	12	1	27	53	♒23	49	53	♒23	48	49	—1	4
	7	4	45	6	9	2	8	2	9	21	♓ 6	9	36	♓ 6	8	41	—0	55
	12	8	6	48	9	6	46	4	6	36	♉ 7	29	6	♉ 7	28	58	—0	8
	13	8	54	17	9	7	42	4	18	29	♉20	25	38	♉20	24	44	—0	54
	14	9	46	26	9	8	38	5	0	38	♊ 3	46	48	♊ 3	44	49	—1	59
	15	10	43	7	9	9	34	5	13	6	♊17	33	14	♊17	30	34	—2	40
	17	12	46	17	9	11	27	6	9	1	♋16	13	35	♋16	10	40	—2	55

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	Q.	′	″	Q.	′	″	′	″
Dec.	18	13	45	21	9	12	23	6	22	23	♌ 0	55	37	♌ 0	52	36	—3	1
	19	14	41	4	9	13	20	7	6	0	♌ 15	42	40	♌ 15	40	35	—2	5
	21	16	22	42	9	15	12	8	3	37	♍ 15	15	28	♍ 15	13	11	—2	17
	25	19	38	36	9	18	56	9	28	32	♏ 13	17	18	♏ 13	14	43	—2	35
Dec.	26	20	32	53	9	19	52	10	11	47	♏ 27	31	48	♏ 27	29	2	—2	46

Anno JULIANO MDCCXXVIII. Currente.

Jan.	3	2	39	45	9	26	24	1	6	34	♓ 0	59	50	♓ 0	58	31	—1	19
	8	5	59	17	10	1	2	3	3	10	♉ 1	58	40	♉ 1	59	32	+0	52
	9	6	44	9	10	1	58	3	14	54	♉ 14	32	55	♉ 14	33	9	+0	14
	10	7	33	14	10	2	54	3	26	55	♉ 27	28	32	♉ 27	28	2	—0	30
	11	8	27	3	10	3	50	4	9	16	♊ 10	50	30	♊ 10	49	12	—1	18
	12	9	25	5	10	4	46	4	21	59	♊ 24	41	9	♊ 24	39	20	—1	49
	14	11	26	37	10	6	39	5	18	30	♋ 23	44	54	♋ 23	42	55	—1	59
	15	12	27	32	10	7	35	6	2	15	♌ 8	49	10	♌ 8	47	57	—1	13
	16	13	22	53	10	8	31	6	16	11	♌ 24	3	2	♌ 24	2	27	—0	35
	17	14	15	6	10	9	27	7	0	16	♍ 9	19	44	♍ 9	19	39	—0	5
	19	15	54	16	10	11	18	7	28	31	♎ 9	34	25	♎ 9	34	13	—0	12
::	20	16	46	14	10	12	14	8	12	31	♎ 24	26	18	♎ 24	23	58	—2	20
	21	17	35	10	10	13	10	8	26	15	♏ 8	58	56	♏ 8	55	43	—3	13
	23	19	24	54	10	15	2	9	22	56	♐ 7	21	25	♐ 7	16	22	—5	3
Jan.	24	20	22	20	10	15	57	10	5	45	♐ 21	8	43	♐ 21	4	13	—4	30
Feb.	3	3	14	32	10	24	16	1	19	15	♈ 15	1	50	♈ 14	59	53	—1	57
	4	3	54	58	10	25	11	2	0	35	♈ 27	11	24	♈ 27	10	0	—1	24
	5	4	37	50	10	26	7	2	11	54	♉ 9	28	52	♉ 9	28	24	—0	28
Cent. ::	8	7	10	34	10	28	53	3	18	1	♊ 18	8	3	♊ 18	7	46	—0	17
Cent. ::	9	8	9	54	10	29	48	4	0	50	♋ 1	51	46	♋ 1	52	9	+0	23
	10	9	7	0	11	0	44	4	14	6	♋ 16	4	3	♋ 16	4	20	+0	17
Cent. ::	13	11	58	53	11	3	31	5	25	46	♍ 1	22	30	♍ 1	23	25	+0	55
Cent.	14	12	52	20	11	4	26	6	10	7	♍ 16	59	54	♍ 17	1	48	+1	54
::	17	15	29	45	11	7	12	7	23	8	♏ 3	25	5	♏ 3	25	27	+0	22
	18	16	22	7	11	8	7	8	7	4	♍ 18	18	30	♍ 18	16	42	—1	48
	19	17	18	56	11	9	2	8	20	41	♐ 2	48	31	♐ 2	45	24	—3	7

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ:

Anno JULIANO MDCCXXVIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	q.	′	″	′	″
Mart.	2	1	53	21	11	19	5	0	29	18	♈23	0	6	♈22	55	45	−4	21
	6	5	0	12	11	22	43	2	15	19	♊12	58	32	♊12	57	17	−1	15
	7	5	55	27	11	23	38	2	27	39	♊26	8	58	♊26	8	20	−0	38
	8	6	52	39	11	24	33	3	10	25	♋ 9	42	49	♋ 9	42	55	+0	6
	9	7	50	11	11	25	27	3	23	36	♋23	44	20	♋23	43	44	−0	36
	11	9	40	55	11	27	17	4	21	9	♌23	9	5	♌23	8	37	−0	28
	12	10	33	32	11	28	11	5	5	23	♍ 8	29	5	♍ 8	29	13	+0	8
	13	11	25	5	11	29	6	5	19	51	♍24	6	31	♍24	8	12	+1	41
	17	15	6	13	0	2	44	7	17	25	♏26	33	22	♏26	34	50	+1	28
	18	16	6	13	0	3	38	8	1	12	♐11	20	26	♐11	21	13	+0	47
	19	17	6	26	0	4	33	8	14	34	♐25	38	44	♐25	36	57	−1	47
	23	20	34	53	0	8	10	10	3	47	♒18	10	4	♒18	6	5	−3	59
Mart.	24	21	17	28	0	9	4	10	15	12	♓ 0	30	35	♓ 0	26	34	−4	1
Apri.	2	2	55	55	0	16	13	1	14	24	♊ 8	51	2	♊ 8	48	44	−2	18
	6	6	36	19	0	19	49	3	4	25	♌ 2	21	47	♌ 2	21	3	−0	44
	7	7	29	27	0	20	43	3	17	55	♌16	35	25	♌16	34	43	−0	42
	10	10	1	23	0	23	24	5	0	15	♎ 1	37	36	♎ 1	37	13	−0	23
	11	10	53	6	0	24	18	5	14	43	♎17	15	24	♎17	15	45	+0	21
Cent.	12	11	48	32	0	25	12	5	29	12	♏ 2	59	13	♏ 3	1	25	+2	12
	14	13	48	17	0	26	59	6	27	41	♐ 4	3	38	♐ 4	6	27	+2	49
	15	14	50	33	0	27	53	7	11	30	♐19	2	24	♐19	4	57	+2	33
	17	16	49	48	0	29	41	8	7	54	♑17	26	20	♑17	24	38	−1	42
	18	17	42	55	1	0	34	8	20	27	♒ 0	48	53	♒ 0	45	53	−3	0
	21	19	56	30	1	3	14	9	25	57	♓ 8	34	51	♓ 8	30	36	−4	15
	22	20	35	51	1	4	7	10	7	15	♓20	43	50	♓20	39	48	−4	2
	23	21	14	33	1	5	0	10	18	25	♈ 2	49	10	♈ 2	46	1	−3	9
	24	21	53	42	1	5	52	10	29	30	♈14	55	48	♈14	53	16	−2	32
Apri.	30	1	45	27	1	10	18	0	26	16	♊17	45	38	♊17	42	23	−3	15
Maii.	4	5	24	20	1	13	51	2	16	32	♌11	49	51	♌11	50	6	+0	15
	5	6	14	48	1	14	44	2	29	57	♌25	57	30	♌25	57	30	+0	0
	6	7	3	39	1	15	37	3	13	41	♍10	22	18	♍10	22	8	−0	10
	7	7	52	0	1	16	30	3	27	44	♍25	6	21	♍25	5	0	−1	21
	8	8	41	11	1	17	23	4	11	50	♎10	7	27	♎10	6	12	−1	15
	9	9	32	39	1	18	16	4	26	5	♎25	23	49	♎25	22	43	−1	6

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					Argument. Annuum.			Diſtantia ☾ à ☉			Longitudo Centri Lunæ Obſervata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Maii.	10	10	27	30	1	19	9	5	10	20	♏10	48	16	♏10	48	24	+0	8
Cent.::	24	21	58	15	2	1	28	11	3	8	♉17	28	28	♉17	24	24	−4	4
Junii.	1	4	12	16	2	7	38	1	29	28	♌21	42	25	♌21	43	56	+1	31
	4	6	36	12	2	10	16	3	10	32	♎4	55	22	♎4	55	7	−0	15
	5	7	25	10	2	11	8	3	24	32	♎19	40	25	♎19	39	46	−0	39
	6	8	16	57	2	12	1	4	8	33	♏4	34	50	♏4	34	0	−0	50
	9	11	13	47	2	14	40	5	19	58	♐19	27	41	♐19	27	53	+0	12
Cent.	10	12	17	1	2	15	33	6	3	19	♑4	6	2	♑4	5	44	−0	18
	15	16	28	33	2	19	56	8	5	4	♓11	5	46	♓11	1	21	−4	25
	16	17	8	27	2	20	48	8	16	39	♓23	27	36	♓23	22	35	−5	1
	17	17	47	36	2	21	40	8	28	8	♈5	38	53	♈5	34	56	−3	57
	21	20	40	10	2	25	10	10	14	7	♉25	0	43	♉24	57	47	−2	56
	22	21	31	41	2	26	2	10	25	57	♊7	54	50	♊7	52	25	−2	25
	23	22	26	45	2	26	55	11	8	1	♊21	9	6	♊21	6	54	−2	12
Junii.	30	3	46	38	3	2	12	1	26	11	♍15	57	12	♍16	0	9	+2	57
Julii.	2	5	22	27	3	3	57	2	23	55	♎15	11	35	♎15	14	41	+3	6
	3	6	12	36	3	4	49	3	7	51	♎29	52	38	♎29	54	34	+1	56
	5	8	2	31	3	6	35	4	5	29	♏29	13	5	♏29	13	57	+0	52
	6	9	2	15	3	7	28	4	19	2	♐13	47	42	♐13	48	13	+0	31
	8	11	2	34	3	9	14	5	15	15	♑12	21	31	♑12	22	16	+0	45
	12	14	22	55	3	12	45	7	3	58	♓5	44	34	♓5	41	38	−2	56
	13	15	3	52	3	13	37	7	15	31	♓18	18	8	♓18	14	23	−3	45
	14	15	43	31	3	14	30	7	26	58	♈0	39	10	♈0	34	40	−4	30
	18	18	31	40	3	18	0	9	12	47	♉19	40	20	♉19	36	39	−3	41
	19	19	21	1	3	18	53	9	24	33	♊2	18	42	♊2	15	6	−3	36
	21	21	10	15	3	20	39	10	18	54	♊28	36	0	♊28	33	3	−2	57
	22	22	7	47	3	21	32	11	1	32	♋12	19	35	♋12	17	11	−2	24
	28	2	29	49	3	25	57	1	8	57	♍25	25	0	♏25	29	39	+4	39
Julii.	31	5	2	0	3	28	36	2	21	5	♏10	10	15	♏10	14	0	+3	45
Aug.	1	5	57	44	3	29	29	3	4	57	♏24	50	30	♏24	52	52	+2	22
	2	6	56	10	4	0	22	3	18	36	♐9	18	58	♐9	20	32	+1	34
	4	8	54	57	4	2	9	4	14	58	♑7	32	3	♑7	34	14	+2	11
	5	9	51	16	4	3	2	4	27	36	♑21	14	15	♑21	16	49	+2	34
	6	10	43	39	4	3	56	5	9	54	♒4	40	21	♒4	41	56	+1	35

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	'	"	S.	o.	'	S.	o.	'	o.	'	"	o.	'	"	'	"
Aug.	11	14	19	38	4	8	20	7	7	34	♈ 8	4	56	♈ 8	1	20	—3	36
	12	14	59	38	4	9	13	7	18.	46	♈20	16	42	♈20	13	11	—3	31
	18	19	53	0	4	14	33	9	29	11	♋ 5	53	38	♋ 5	49	53	—3	45
	:: 26	2	1	19	4	20	48	1	4	58	♎19	25	10	♎19	27	22	+2	12
Aug.	29	4	49	58	4	23	30	2	17	28	♐ 4	44	42	♐ 4	48	57	+4	15
Cent.	6	11	37	20	5	0	40	5	26	19	♓21	20	47	♓21	21	29	+0	42
Sept.	7	12	17	50	5	1	34	6	7	25	♈ 3	39	31	♈ 3	39	21	—0	10
	8	12	57	32	5	2	28	6	18	26	♈15	52	53	♈15	51	53	—1	0
	11	15	7	12	5	5	9	7	21	44	♉22	31	32	♉22	29	32	—2	0
	12	15	56	0	5	6	3	8	3	10	♊ 4	54	13	♊ 4	53	5	—1	8
	:: 13	16	47	45	5	6	57	8	14	51	♊17	28	7	♊17	27	36	—0	31
	:: 14	17	41	45	5	7	51	8	26	51	♋ 0	19	4	♋ 0	17	51	—1	13
	15	18	36	38	5	8	46	9	9	13	♋13	29	41	♋13	27	32	—2	9
	16	19	31	8	5	9	40	9	21	59	♋27	3	6	♋27	0	35	—2	31
	19	22	6	50	5	12	23	11	2	35	♍10	30	20	♍10	27	8	—3	12
	25	2	37	39	5	16	56	1	14	36	♏28	38	58	♏28	41	38	+2	40
	28	5	41	17	5	19	41	2	25	51	♑12	37	21	♑12	39	8	+1	47
Sept.	29	6	36	25	5	20	35	3	8	44	♑26	17	6	♑26	17	55	+0	49
Oct.	::1	8	11	30	5	22	24	4	3	11	♒22	19	56	♒22	21	39	+1	43
Cent.	::5	10	55	42	5	26	2	5	18	24	♈11	48	11	♈11	49	35	+1	24
	6	11	36	7	5	26	56	5	29	20	♈23	58	53	♈23	59	55	+1	2
	::8	13	3	21	5	28	45	6	21	14	♉18	27	31	♉18	26	28	—1	3
	9	13	52	16	5	29	40	7	2	22	♊ 0	48	36	♊ 0	47	13	—1	23
	10	14	42	51	6	0	35	7	13	42	♊13	15	40	♊13	15	10	—0	30
	11	15	35	35	6	1	30	7	25	17	♊25	52	58	♊25	52	59	+0	1
Cent.	::14	18	13	17	6	4	15	9	2	5	♌ 5	11	23	♌ 5	11	9	—0	14
Octo.	31	8	14	50	6	18	59	4·	6	34	♓25	36	25	♓25	35	46	—0	39
Nov.	1	8	54	2	6	19	56	4	17	45	♈ 7	47	4	♈ 7	47	44	+0	40
	: : 5	11	46	44	6	23	37	6	1	49	♉26	45	20	♉26	45	18	—0	2
	6	12	39	9	6	24	33	6	13	0	♊ 9	16	44	♊ 9	16	0	—0	44
Sect.	7	13	29	22	6	25	28	6	24	21	♊21	54	12	♊21	53	11	—1	1
	8	14	25	10	6	26	24	7	5	58	♋ 4	42	42	♋ 4	42	10	—0	32
Cent.	::9	15	17	9	6	27	20	7	17	50	♋17	38	44	♋17	39	32	+0	48
	11	16	59	53	6	29	11	8	12	37	♌14	12	7	♌14	12	13	+0	6

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
Nov.	12	17	47	57	7	0	7	8	25	33	♌27	53	28	♌27	53	57	+0	29
	13	18	35	5	7	1	3	9	8	52	♍11	56	13	♍11	55	13	−1	0
	16	21	3	21	7	3	49	10	20	43	♎26	31	18	♎26	27	12	−4	6
::	23	3	8	42	7	9	27	1	14	54	♑28	25	37	♑28	23	52	−1	45
	26	5	31	29	7	12	14	2	22	26	♓ 8	32	46	♓ 8	29	33	−3	13
	28	6	51	57	7	14	5	3	15	46	♈ 3	25	0	♈ 3	22	34	−2	26
	29	7	31	38	7	15	1	3	27	7	♈15	35	47	♈15	34	56	−0	51
Nov.	30	8	12	36	7	15	56	4	8	19	♈27	45	35	♈27	45	31	−0	4
Dec.	1	8	55	47	7	16	52	4	19	29	♉ 9	59	2	♉ 9	59	1	−0	1
	3	10	31	14	7	18	44	5	11	52	♊ 4	49	39	♊ 4	48	53	−0	46
Cent.	5	12	18	31	7	20	36	6	4	47	♋ 0	23	59	♋ 0	22	42	−1	17
	7	14	6	46	7	22	28	6	28	34	♋26	43	29	♋26	42	1	−1	28
	8	14	57	27	7	23	24	7	10	53	♌10	8	6	♌10	7	26	−0	40
	10	16	32	41	7	25	16	8	6	28	♍ 7	32	8	♍ 7	32	25	+0	17
	11	17	18	50	7	26	12	8	19	44	♍21	35	17	♍21	34	49	−0	28
	12	18	5	43	7	27	8	9	3	17	♎ 5	55	15	♎ 5	53	3	−2	12
	13	18	54	37	7	28	4	9	17	6	♎20	32	22	♎20	28	47	−3	35
	15	20	43	47	7	29	56	10	15	12	♏20	34	55	♏20	30	42	−4	13
Dec.	30	8	23	19	8	13	1	4	9	40	♉29	48	50	♉29	47	21	−1	29

Anno JULIANO MDCCXXIX. Currente.

M.	D.	H.	′	″	S.	°.	′	S.	°.	′	°.	′	″	°.	′	″	′	″
Jan.	1	10	7	52	8	14	53	5	2	47	♊25	12	36	♊25	12	9	−0	27
Cent.	3	12	1	40	8	16	45	5	26	42	♋21	41	18	♋21	40	24	−0	54
	7	15	17	14	8	20	29	7	17	34	♍17	17	12	♍17	15	8	−2	4
	12	19	34	24	8	25	8	9	26	12	♐ 0	15	42	♐ 0	9	36	−6	6
	25	5	28	15	9	6	17	2	25	13	♉12	16	20	♉12	16	20	+0	0
	26	6	14	41	9	7	13	3	6	38	♉24	32	54	♉24	33	7	+0	13
	27	7	4	14	9	8	8	3	18	10	♊ 6	56	5	♊ 6	57	15	+1	10
Cent.::	28	7	57	23	9	9	4	3	29	51	♊19	33	7	♊19	33	37	+0	30
Jan.	30	9	44	32	9	10	55	4	23	49	♋15	34	34	♋15	35	35	+1	1
Cent.	1	11	31	12	9	12	46	5	18	50	♌12	58	22	♌12	59	4	+0	42
Feb.	2	12	22	20	9	13	42	6	1	47	♌27	10	19	♌27	10	52	+0	33
	4	13	59	8	9	15	33	6	28	28	♍26	20	37	♍26	20	20	−0	17

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIX. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Feb.	5	14	48	0	9	16	28	7	12	11	♎11	11	22	♎11	10	13	−1	9
	6	15	38	43	9	17	24	7	26	3	♎26	5	43	♎26	3	45	−1	58
	9	18	29	14	9	20	10	9	7	51	♐10	33	0	♐10	26	52	−6	8
	10	19	30	24	9	21	6	9	21	33	♐25	4	41	♐24	58	45	−5	56
	11	20	30	40	9	22	2	10	4	58	♑ 9	24	52	♑ 9	18	31	−6	21
	12	21	27	46	9	22	57	10	18	4	♑23	29	10	♑23	24	1	−5	9
	25	6	38	18	10	3	56	3	8	34	♊26	41	33	♊26	43	42	+2	9
	26	7	31	37	10	4	51	3	20	33	♋ 9	29	28	♋ 9	31	56	+2	28
	27	8	24	43	10	5	46	4	2	49	♋22	37	0	♋22	39	44	+2	44
Feb.	28	9	16	46	10	6	41	4	15	23	♌ 6	8	22	♌ 6	10	46	+2	24
Mart.	2	10	56	54	10	8	30	5	11	32	♍ 4	29	55	♍ 4	33	19	+3	24
	5	13	29	17	10	11	15	6	23	2	♎19	48	17	♎19	48	48	+0	31
	23	3	39	5	10	26	39	1	25	0	♊ 9	27	45	♊ 9	26	40	−1	5
	25	5	22	20	10	28	27	2	18	6	♋ 4	17	33	♋ 4	18	56	+1	23
Mart.	30	9	32	23	11	2	57	4	21	20	♍11	38	0	♍11	38	57	+0	57
Apri.	2	12	5	41	11	5	39	6	3	33	♎27	30	42	♎27	31	13	+0	31
	4	14	7	35	11	7	27	7	2	37	♏29	10	22	♏29	10	58	+0	36
	5	15	11	49	11	8	22	7	17	3	♐14	44	7	♐14	44	8	−0	1
	19	1	34	53	11	19	57	0	24	41	♊ 5	19	9	♊ 5	16	2	−3	7
	22	4	8	29	11	22	37	1	28	47	♋12	29	46	♋12	29	4	−0	42
	23	4	58	57	11	23	31	2	10	38	♋25	9	53	♋25	10	43	+0	50
	28	8	57	28	11	27	56	4	15	34	♎ 3	59	26	♎ 3	59	21	−0	5
Apri.	29	9	48	40	11	28	50	4	29	44	♎19	15	5	♎19	14	2	−1	3
Maii.	2	12	51	8	0	1	30	6	13	31	♐ 6	54	54	♐ 6	56	6	+1	12
	7	17	47	34	0	5	57	8	22	50	♒21	8	45	♒21	3	25	−5	20
	9	19	15	8	0	7	43	9	17	34	♓17	19	43	♓17	13	45	−5	58
	18	1	13	9	0	14	44	0	17	37	♊26	3	35	♊26	1	53	−1	42
	19	2	4	52	0	15	37	0	28	57	♋ 8	32	48	♋ 8	31	6	−1	42
	20	2	55	34	0	16	30	1	10	31	♋21	8	5	♋21	7	49	−0	16
	24	6	6	48	0	20	1	2	29	58	♍13	47	55	♍13	48	23	+0	28
	26	7	37	3	0	21	46	3	26	58	♎12	20	27	♎12	18	51	−1	36
Maii.	29	10	26	23	0	24	25	5	9	58	♏28	35	13	♏28	31	39	−3	34
Cent.	30	11	33	16	0	25	18	5	24	35	♐14	29	17	♐14	26	42	−2	35
Cent.	31	12	40	5	0	26	11	6	9	5	♑ 0	16	43	♑ 0	14	49	−1	54

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIX. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Junii.	2	14	44	55	0	27	57	7	7	15	♒ 0	45	3	♒ 0	42	39	−2	24
	3	15	38	10	0	28	50	7	20	44	♒15	10	47	♒15	7	45	−3	2
	4	16	26	38	0	29	43	8	3	46	♒29	3	16	♒28	59	56	−3	20
	5	17	11	12	1	0	35	8	16	23	♓12	26	43	♓12	22	23	−4	20
	6	17	53	18	1	1	27	8	28	37	♓25	24	25	♓25	20	6	−4	19
	7	18	34	26	1	2	20	9	10	31	♈ 8	3	32	♈ 7	59	31	−4	1
	10	20	42	49	1	4	57	10	14	49	♉15	0	20	♉14	59	2	−1	18
	11	21	29	55	1	5	49	10	26	0	♉27	15	17	♉27	14	30	−0	47
	17	1	42	12	1	10	12	0	22	49	♋29	55	31	♋29	55	29	−0	2
	18	2	30	14	1	11	5	1	4	44	♌12	54	22	♌12	54	30	+0	8
	22	5	32	19	1	14	35	2	25	44	♎ 7	15	50	♎ 7	15	33	−0	17
	24	7	13	16	1	16	20	3	23	19	♏ 6	27	15	♏ 6	25	2	−2	13
	25	8	10	34	1	17	13	4	7	31	♏21	35	24	♏21	32	0	−3	24
	26	9	12	36	1	18	6	4	21	51	♐ 6	58	42	♐ 6	55	26	−3	16
	28	11	23	0	1	19	52	5	20	28	♑ 7	58	53	♑ 7	55	27	−3	26
	29	12	27	28	1	20	45	6	4	30	♑23	14	0	♑23	11	20	−2	40
Junii.	30	13	24	17	1	21	38	6	18	11	♒ 8	4	57	♒ 8	2	45	−2	12
Julii.	1	14	15	52	1	22	31	7	1	29	♒22	28	50	♒22	26	35	−2	15
	2	15	3	8	1	23	23	7	14	24	♓ 6	24	22	♓ 6	21	26	−2	56
	11	21	56	15	2	1	16	10	29	54	♊29	52	40	♊29	52	46	+0	6
	21	5	8	42	2	9	11	2	22	25	♏ 1	44	26	♏ 1	45	7	+0	41
	22	6	3	0	2	10	4	3	6	19	♏16	25	28	♏16	25	48	+0	20
	23	7	1	46	2	10	57	3	20	22	♐ 1	19	11	♐ 1	17	57	−1	14
	26	10	9	36	2	13	37	5	2	27	♑16	21	44	♑16	19	24	−2	20
	27	11	7	56	2	14	30	5	16	5	♒ 1	9	20	♒ 1	6	40	−2	40
Julii.	28	12	1	37	2	15	23	5	29	25	♒15	40	6	♒15	37	10	−2	56
Aug.	2	15	48	7	2	19	47	8	1	17	♈22	52	49	♈22	51	41	−1	8
	3	16	32	5	2	20	40	8	12	57	♉ 5	25	29	♉ 5	23	47	−1	42
	6	18	55	42	2	23	19	9	17	27	♊12	23	40	♊12	23	17	−0	23
	10	22	21	6	2	26	52	11	4	20	♌ 3	6	3	♌ 3	5	49	−0	14
	17	3	5	32	3	2	11	1	21	41	♎27	16	24	♎27	19	28	+3	4
	18	3	59	6	3	3	5	2	5	30	♏12	1	38	♏12	3	49	+2	11
	19	4	56	24	3	3	59	2	19	28	♏26	49	54	♏26	52	01	+2	7
	21	6	59	9	3	5	46	3	17	27	♐26	24	58	♐26	25	19	+0	21

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIX. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	o.	′	S.	o.	′	o.	′	″	o.	′	″	′	″
Aug.	22	8	0	24	3	6	40	4	1	16	♑11	4	10	♑11	3	46	−0	24
	24	9	52	44	3	8	28	4	28	7	♒ 9	50	27	♒ 9	49	22	−1	5
	25	10	42	42	3	9	21	5	11	3	♒23	52	41	♒23	52	5	−0	36
	26	11	29	18	3	10	15	5	23	39	♓ 7	40	1	♓ 7	39	8	−0	53
	27	12	15	48	3	11	8	6	5	58	♓21	12	25	♓21	11	20	−1	5
	29	13	41	52	3	12	55	6	29	47	♈17	25	8	♈17	23	58	−1	10
	30	14	25	36	3	13	49	7	11	23	♉ 0	8	23	♉ 0	7	56	−0	27
Aug.	31	15	10	55	3	14	42	7	22	53	♉12	40	45	♉12	39	44	−1	1
Sept.	1	15	58	10	3	15	36	8	4	19	♉25	3	45	♉25	2	37	−1	8
	2	16	47	21	3	16	29	8	15	44	♊ 7	21	40	♊ 7	20	28	−1	12
	4	18	29	30	3	18	17	9	8	46	♋ 1	59	58	♋ 1	59	24	−0	34
	7	20	59	50	3	20	59	10	14	35	♌10	20	8	♌10	19	21	−0	47
	8	21	47	30	3	21	53	10	27	1	♌23	47	22	♌23	46	10	−1	12
	20	7	48	22	4	1	50	3	27	11	♒ 5	17	57	♒ 5	17	22	−0	35
	21	8	38	35	4	2	44	4	10	11	♒19	9	0	♒19	9	23	+0	23
	22	9	25	19	4	3	39	4	22	50	♓ 2	45	53	♓ 2	46	28	+0	35
	23	10	9	33	4	4	33	5	5	7	♓16	8	40	♓16	9	57	+1	17
	24	10	52	27	4	5	27	5	17	5	♓29	19	51	♓29	20	42	+0	51
	26	12	20	25	4	7	16	6	10	19	♈25	5	45	♈25	7	20	+1	35
	27	13	5	6	4	8	10	6	21	40	♉ 7	42	34	♉ 7	43	58	+1	24
	28	13	51	44	4	9	4	7	2	55	♉20	11	15	♉20	11	36	+0	21
	29	14	40	13	4	9	59	7	14	9	♊ 2	31	56	♊ 2	32	12	+0	16
Sept.	30	15	30	18	4	10	53	7	25	24	♊14	47	49	♊14	48	27	+0	38
Octo.	2	17	11	53	4	12	43	8	18	13	♋ 9	20	58	♋ 9	21	46	+0	48
	3	18	1	35	4	13	38	8	29	53	♋21	46	31	♋21	47	45	+1	14
	5	19	37	0	4	15	27	9	24	0	♌17	26	5	♌17	26	18	+0	13
	6	20	23	20	4	16	21	10	6	33	♍ 0	51	58	♍ 0	50	24	−1	34
	7	21	9	37	4	17	16	10	19	28	♍14	46	10	♍14	43	29	−2	41
: :	8	21	57	4	4	18	11	11	2	45	♍29	12	35	♍29	8	2	−4	33
	15	3	46	6	4	23	42	1	27	45	♑ 1	36	15	♑ 1	36	58	+0	43
Cent.	18	6	37	28	4	26	28	3	8	52	♒15	2	10	♒15	0	33	−1	37
	19	7	23	53	4	27	23	3	21	46	♒28	40	31	♒28	39	11	−1	20
	20	8	9	20	4	28	18	4	4	16	♓11	59	39	♓12	0	31	+0	52
	21	8	51	2	4	29	13	4	16	22	♓25	4	55	♓25	5	36	+0	41

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIX. Currente.

Tranſitûs Limbi Lunæ T. æq.					Argument. Annuum.			Diſtantia ☾ à ☉			Longitudo Centri Lunæ Obſervata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Octo.	24	10	59	24	5	1	58	5	20	58	♉ 3	14	45	♉ 3	17	8	+2	23
	28	14	15	20	5	5	39	7	5	17	♊ 22	38	46	♊ 22	39	46	+1	0
	30	15	55	34	5	7	30	7	27	46	♋ 17	9	30	♋ 17	10	30	+1	0
Octo.	31	16	43	36	5	8	25	8	9	18	♋ 29	32	18	♋ 29	33	44	+1	26
Nov.	1	17	29	56	5	9	21	8	21	5	♌ 12	7	7	♌ 12	8	27	+1	20
	2	18	15	6	5	10	16	9	3	13	♌ 25	0	12	♌ 25	0	16	+0	4
	4	19	45	2	5	12	7	9	28	38	♍ 22	2	27	♍ 21	59	55	−2	32
	5	20	32	14	5	13	2	10	11	58	♎ 6	21	15	♎ 6	17	13	−4	2
::	16	6	6	32	5	22	21	3	2	19	♓ 7	46	14	♓ 7	44	0	−2	14
	17	6	50	8	5	23	17	3	14	49	♓ 21	2	58	♓ 21	0	46	−2	12
	19	8	14	30	5	25	8	4	8	41	♈ 16	41	36	♈ 16	42	24	+0	48
	20	8	57	36	5	26	4	4	20	9	♈ 29	13	49	♈ 29	15	27	+1	38
	21	9	42	24	5	26	59	5	1	24	♉ 11	38	48	♉ 11	41	11	+2	23
	22	10	29	21	5	27	55	5	12	28	♉ 23	59	37	♉ 24	1	36	+1	59
	23	11	18	20	5	28	51	5	23	28	♊ 6	17	22	♊ 6	18	43	+1	21
	25	13	1	47	6	0	43	6	15	25	♋ 0	49	38	♋ 0	50	7	+0	29
	27	14	40	23	6	2	34	7	7	41	♋ 25	26	53	♋ 25	26	9	−0	44
	28	15	26	55	6	3	30	7	19	7	♌ 7	52	56	♌ 7	52	24	−0	32
Nov.	29	16	11	38	6	4	26	8	0	48	♌ 20	28	26	♌ 20	28	37	+0	11
Dec.	1	17	38	48	6	6	17	8	25	12	♍ 16	30	22	♍ 16	29	42	−0	40
	2	18	23	20	6	7	13	9	8	0	♎ 0	6	25	♎ 0	4	41	−1	44
	4	20	1	12	6	9	5	10	4	55	♎ 28	51	21	♎ 28	45	59	−5	22
	14	4	45	33	6	17	32	2	11	42	♓ 15	58	19	♓ 15	57	3	−1	16
	15	5	29	24	6	18	27	2	24	17	♓ 29	23	4	♓ 29	20	55	−2	9
	19	8	26	0	6	22	11	4	11	14	♉ 19	54	56	♉ 19	55	50	+0	54
	21	10	4	10	6	24	2	5	3	29	♊ 14	26	5	♊ 14	27	20	+1	15
	22	10	55	1	6	24	58	5	14	30	♊ 26	42	2	♊ 26	42	54	+0	52
	28	15	37	23	7	0	34	7	23	3	♍ 12	17	50	♍ 12	16	2	−1	48
	29	16	20	46	7	1	30	8	5	24	♍ 25	34	19	♍ 25	32	36	−1	43
Dec.	30	17	5	37	7	2	26	8	18	9	♎ 9	10	49	♎ 9	8	25	−2	24

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Jan.	1	18	44	56	7	4	17	9	14	51	♏ 7	34	42	♏ 7	29	56	−4	46

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno Juliano MDCCXXX. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Jan.	13	4	50	10	7	14	35	2	15	13	♈20	1	35	♈20	1	29	—0	6
	14	5	34	52	7	15	30	2	27	10	♉ 2	49	26	♉ 2	49	50	+0	24
	15	6	20	57	7	16	26	3	8	52	♉15	21	47	♉15	22	21	+0	34
	16	7	8	49	7	17	22	3	20	21	♉27	43	56	♉27	44	21	+0	25
	18	8	48	53	7	19	13	4	12	56	♊22	13	55	♊22	15	2	+1	7
	21	11	18	15	7	22	0	5	16	41	♋29	24	9	♋29	23	48	—0	21
	25	14	19	55	7	25	42	7	3	48	♍21	26	30	♍21	22	59	—3	31
	27	15	51	3	7	27	33	7	29	7	♎18	53	7	♎18	48	56	—4	11
	28	16	40	46	7	28	29	8	12	18	♏ 3	0	0	♏ 2	55	18	—4	42
	29	17	34	33	7	29	25	8	25	50	♏17	23	25	♏17	17	42	—5	43
Jan.	30	18	32	39	8	0	21	9	9	40	♐ 2	1	45	♐ 1	55	39	—6	6
Feb.	9	2	41	30	8	8	41	1	11	38	♈13	54	15	♈13	54	47	+0	32
	10	3	26	57	8	9	36	1	23	49	♈27	8	43	♈27	9	54	+1	11
	14	6	41	2	8	13	17	3	10	31	♊17	22	16	♊17	23	22	+1	6
	15	7	31	44	8	14	12	3	21	56	♊29	36	15	♊29	38	6	+1	51
	16	8	23	8	8	15	7	4	3	21	♋11	54	21	♋11	55	55	+1	34
	17	9	11	1	8	16	2	4	14	48	♋24	18	50	♋24	19	56	+1	6
∴	20	11	29	14	8	18	47	5	20	1	♍ 2	56	5	♍ 2	54	44	—1	21
	21	12	15	54	8	19	42	6	2	13	♍16	24	42	♍16	22	25	—2	17
	23	13	47	53	8	21	31	6	27	28	♎14	13	33	♎14	10	6	—3	27
Feb.	24	14	37	32	8	22	26	7	10	35	♎28	32	16	♎28	27	25	—4	51
Mart.	13	4	32	13	9	7	2	2	7	58	♊12	15	18	♊12	16	30	+1	12
	15	6	13	22	9	8	51	3	0	54	♋ 6	46	30	♋ 6	48	30	+2	0
	16	7	2	31	9	9	45	3	12	25	♋19	2	20	♋19	4	51	+2	31
	17	7	50	9	9	10	40	3	24	02	♌ 1	26	55	♌ 1	28	48	+1	53
	19	9	21	14	9	12	28	4	17	48	♌27	1	21	♌27	1	55	+0	34
	20	10	5	46	9	13	22	5	0	1	♍10	19	29	♍10	19	48	+0	19
	21	10	50	53	9	14	16	5	12	33	♍24	3	45	♍24	2	24	—1	21
	22	11	38	45	9	15	10	5	25	24	♎ 8	11	55	♎ 8	10	16	—1	39
	23	12	29	25	9	16	4	6	8	35	♎22	42	44	♎22	40	48	—1	56
	30	19	19	50	9	22	25	9	15	40	♒ 6	35	38	♒ 6	28	2	—7	36
Mart.	31	20	10	59	9	23	19	9	29	8	♒20	49	52	♒20	42	22	—7	30
Apri.	1	20	58	50	9	24	12	10	12	16	♓ 4	50	46	♓ 4	44	53	—5	53

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXX. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Apri.	13	5	42	45	10	4	2	2	21	57	♋26	18	53	♋26	20	21	+1	28
	15	7	13	15	10	5	49	3	15	26	♌21	15	27	♌21	16	41	+1	14
	16	7	57	5	10	6	42	3	27	33	♍ 4	10	26	♍ 4	11	12	+0	46
	17	8	41	10	10	7	35	4	9	58	♍17	30	29	♍17	30	41	+0	12
	18	9	26	37	10	8	28	4	22	45	♎ 1	19	32	♎ 1	18	39	—0	53
	19	10	14	40	10	9	22	5	5	53	♎15	38	45	♎15	37	22	—1	23
	20	11	6	32	10	10	15	5	19	24	♏ 0	26	40	♏ 0	24	53	—1	47
	21	12	5	28	10	11	9	6	3	17	♏15	39	2	♏15	37	51	—1	11
	25	16	17	40	10	14	44	8	0	24	♑17	14	18	♑17	11	17	—3	1
	26	17	15	20	10	15	37	8	14	29	♒ 2	4	46	♒ 2	0	55	—3	51
	27	18	8	14	10	16	31	8	28	14	♒16	33	0	♒16	28	22	—4	38
	28	18	57	11	10	17	24	9	11	40	♓ 0	41	26	♓ 0	35	51	—5	35
Apri.	29	19	43	12	10	18	17	9	24	42	♓14	29	52	♓14	24	59	—4	53
Maii.	11	4	23	37	10	28	0	2	2	26	♌ 3	58	28	♌ 4	2	18	+3	50
	13	5	51	3	10	29	45	2	25	42	♌28	50	17	♌28	50	3	—0	14
	14	6	33	50	11	0	37	3	7	48	♍11	41	43	♍11	40	59	—0	44
	15	7	17	23	11	1	30	3	20	16	♍24	57	46	♍24	56	15	—1	31
	16	8	2	55	11	2	23	4	3	9	♎ 8	43	12	♎ 8	40	57	—2	15
	17	8	51	52	11	3	16	4	16	26	♎23	1	18	♎22	58	24	—2	54
	19	10	44	22	11	5	2	5	14	16	♏23	12	36	♏23	9	20	—3	16
	21	12	54	30	11	6	48	6	13	15	♐24	44	35	♐24	42	27	—2	8
	22	14	2	39	11	7	42	6	27	54	♑10	32	5	♑10	31	21	—0	44
	23	15	4	28	11	8	35	7	12	23	♑26	3	21	♑26	2	29	—0	52
	24	16	1	6	11	9	28	7	26	36	♒11	10	31	♒11	9	21	—1	10
	26	17	40	50	11	11	13	8	23	58	♓10	4	32	♓10	2	14	—2	18
	27	18	26	22	11	12	6	9	7	2	♓23	53	15	♓23	50	27	—2	48
	28	19	10	44	11	12	58	9	19	41	♈ 7	19	34	♈ 7	17	20	—2	14
Maii.	30	20	40	37	11	14	43	10	13	52	♉ 3	21	22	♉ 3	20	4	—0	40
Junii.	9	3	48	26	11	22	36	1	25	8	♌24	26	59	♌24	25	35	—1	24
	10	4	30	32	11	23	28	2	6	49	♍ 7	0	17	♍ 6	57	23	—2	54
	11	5	12	39	11	24	21	2	18	53	♍19	50	2	♍19	48	50	—1	12
::	13	6	41	48	11	26	6	3	14	9	♎16	40	37	♎16	38	54	—1	43
Cent.	18	11	39	17	0	0	31	5	24	31	♑ 2	19	22	♑ 2	15	48	—3	34
Cent.	19	12	44	17	0	1	24	6	9	13	♑18	13	20	♑18	11	6	—2	14

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno Juliano MDCCXXX. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	H.	D.	′	″	S.	°	′	S.	°	′	♀	′	″	♀	′	″	′	″
Junii.	21	14	42	7	0	3	10	7	8	7	♒19	18	40	♒19	18	27	—0	13
	23	16	21	18	0	4	55	8	5	39	♓18	39	4	♓18	40	28	+1	24
	28	20	13	21	0	9	17	10	7	26	♉24	38	3	♉24	38	30	+0	27
::	29	21	3	0	0	10	10	10	18	52	♊ 7	2	2	♊ 7	3	30	+1	28
Julii.	7	2	29	51	0	16	18	1	7	3	♍ 3	1	10	♍ 2	59	32	—1	38
	14	8	12	16	0	22	26	4	6	54	♐ 8	59	22	♐ 8	54	56	—4	26
	16	10	21	29	0	24	13	5	5	48	♑ 9	58	21	♑ 9	53	58	—4	23
Cent.	17	11	25	36	0	25	6	5	20	25	♑25	43	19	♑25	39	31	—3	48
	19	13	20	0	0	26	52	6	19	7	♒26	47	34	♒26	46	24	—1	10
Cent.::	21	14	58	0	0	28	38	7	16	34	♓26	26	25	♓26	25	3	—1	22
	22	15	46	0	0	29	30	7	29	43	♈10	32	25	♈10	32	1	—0	24
	23	16	32	53	1	0	23	8	12	29	♈24	12	17	♈24	10	2	—2	15
	24	17	20	7	1	1	16	8	24	52	♉ 7	22	34	♉ 7	22	29	—0	5
	25	18	8	40	1	2	9	9	6	55	♉20	13	54	♉20	13	38	—0	16
Julii.	26	18	58	24	1	3	2	9	18	42	♊ 2	48	24	♊ 2	49	10	+0	46
Aug.	6	2	37	0	1	11	51	1	13	3	♎ 7	48	29	♎ 7	48	27	—0	2
	7	3	22	36	1	12	43	1	25	29	♎21	14	57	♎21	15	19	+0	22
	11	7	2	42	1	16	17	3	19	4	♐18	7	27	♐18	5	50	—1	37
	12	8	5	22	1	17	11	4	2	14	♑ 3	7	43	♑ 3	5	17	—2	26
	13	9	7	19	1	18	4	4	17	33	♑18	20	28	♑18	17	53	—2	35
	14	10	6	37	1	18	58	5	1	50	♒ 3	40	5	♒ 3	37	21	—2	44
	15	11	2	27	1	19	51	5	16	1	♒19	0	37	♒18	57	38	—2	59
Cent.	16	11	56	2	1	20	45	6	0	0	♓ 4	12	58	♓ 4	10	52	—2	6
	17	12	47	0	1	21	38	6	13	42	♓19	9	41	♓19	8	40	—1	1
	18	13	35	24	1	22	32	6	27	4	♈ 3	45	11	♈ 3	44	14	—0	57
	19	14	23	16	1	23	25	7	10	5	♈17	54	55	♈17	54	19	—0	36
	20	15	11	34	1	24	18	7	22	45	♉ 1	38	25	♉ 1	37	38	—0	47
	21	16	0	46	1	25	12	8	5	7	♉14	56	19	♉14	55	12	—1	7
	23	17	41	56	1	26	59	8	29	0	♊10	27	29	♊10	26	31	—0	58
	24	18	32	56	1	27	52	9	10	36	♊22	50	15	♊22	49	29	—0	46
	25	19	23	9	1	28	46	9	22	4	♋ 5	4	34	♋ 5	4	17	—0	17
	26	20	11	55	1	29	40	10	3	26	♋17	15	57	♋17	16	13	+0	16
	28	21	42	55	2	1	26	10	26	6	♌11	49	41	♌11	50	18	+0	37
Aug.	29	22	27	41	2	2	20	11	7	32	♌24	21	47	♌24	22	4	+0	17

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno Juliano MDCCXXX. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	Q	′	″	Q	′	″	′	″
Sept.	7	4	56	8	2	9	30	2	17	46	♐13	30	11	♐13	32	27	+2	16
	9	6	58	55	2	11	19	3	15	40	♑12	52	25	♑12	51	45	—0	40
	13	10	33	36	2	14	55	5	11	7	♓12	10	31	♓12	10	19	—0	12
	16	13	0	44	2	17	38	6	20	14	♈25	11	14	♈25	11	27	+0	13
Sept.	18	14	40	55	2	19	26	7	14	51	♉22	9	45	♉22	8	26	—1	19
Octo.	3	1	50	54	3	2	8	1	2	46	♏24	20	9	♏24	20	5	—0	4
	5	3	51	28	3	3	58	2	0	9	♐23	43	16	♐23	45	45	+2	29
	10	8	29	16	3	8	33	4	9	16	♓6	42	29	♓6	44	10	+1	41
	13	10	50	38	3	11	17	5	18	9	♈19	7	27	♈19	9	44	+2	17
	15	12	30	33	3	13	7	6	12	39	♉16	18	38	♉16	19	57	+1	19
	21	17	31	7	3	18	38	8	21	59	♌1	41	44	♌1	39	44	—2	0
	23	18	58	4	3	20	28	9	15	0	♌26	15	40	♌26	13	21	—2	19
Octo.	26	21	7	17	3	23	12	10	21	4	♎5	12	2	♎5	8	18	—3	44
Nov.	2	2	43	41	3	28	47	1	11	38	♑3	18	27	♑3	18	58	+0	31
	3	3	44	50	3	29	43	1	25	47	♑18	24	35	♑18	24	5	—0	30
	4	4	42	11	4	0	38	2	9	52	♒3	18	22	♒3	19	37	+1	15
	5	5	35	30	4	1	34	2	23	48	♒17	58	45	♒17	59	12	+0	27
	6	6	25	16	4	2	30	3	7	28	♓2	23	28	♓2	23	46	+0	18
	7	7	12	40	4	3	25	3	20	51	♓16	34	13	♓16	34	59	+0	46
	9	8	45	11	4	5	16	4	16	36	♈14	16	39	♈14	18	46	+2	7
	10	9	32	20	4	6	12	4	28	59	♈27	48	31	♈27	52	5	+3	34
	11	10	21	11	4	7	7	5	11	5	♉11	9	54	♉11	12	37	+2	43
	13	12	5	40	4	8	59	6	4	30	♊7	13	3	♊7	14	32	+1	29
	17	15	25	16	4	12	42	7	19	34	♋26	53	43	♋26	51	55	—1	48
	18	16	9	56	4	13	37	8	0	47	♌9	2	18	♌9	0	15	—2	3
	19	16	52	40	4	14	33	8	12	7	♌21	12	45	♌21	10	54	—1	51
	20	17	34	18	4	15	28	8	23	37	♍3	31	20	♍3	29	29	—1	51
	22	18	58	8	4	17	19	9	17	22	♍28	57	11	♍28	53	3	—4	8
	23	19	42	42	4	18	15	9	29	45	♎12	15	38	♎12	11	48	—3	50
	24	20	30	39	4	19	11	10	12	31	♎26	3	27	♎25	59	14	—4	13
Nov.	25	21	23	12	4	20	7	10	25	42	♏10	23	22	♏10	18	54	—4	28
Dec.	1	2	31	18	4	24	48	1	6	17	♑27	14	18	♑27	14	28	+0	10
	5	5	57	16	4	28	33	3	1	48	♓26	18	28	♓26	18	48	+0	20
	8	8	17	54	5	1	20	4	9	43	♉6	56	26	♉6	58	7	+1	41

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno Juliano MDCCXXX. Currente.

Tranſitûs Limbi Lunæ T. æq.					Argument. Annuum.			Diſtantia ☾ à ☉			Longitudo Centri Lunæ Obſervata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	Q	′	″	′	″
Dec.	9	9	7	13	5	2	16	4	21	39	♉19	58	23	♉20	0	3	+1	40
	10	9	57	57	5	3	12	5	3	18	♊ 2	47	28	♊ 2	49	11	+1	43
	11	10	49	30	5	4	8	5	14	42	♊15	25	56	♊15	26	58	+1	2
	12	11	40	46	5	5	4	5	25	55	♊27	54	0	♊27	53	17	—0	43
	13	12	33	0	5	6	0	6	7	0	♋10	15	28	♋10	15	6	—0	22
	14	13	20	53	5	6	56	6	18	0	♋22	29	5	♋22	27	59	—1	6
	15	14	6	24	5	7	52	6	28	59	♌ 4	39	11	♌ 4	37	7	—2	4
	16	14	49	41	5	8	48	7	10	2	♌16	48	9	♌16	45	24	—2	45
	17	15	31	23	5	9	44	7	21	12	♌28	59	42	♌28	57	5	—2	37
Dec.	23	20	2	31	5	15	19	10	4	26	♏17	35	40	♏17	31	56	—3	44
Anno Juliano MDCCXXXI. Currente.																		
Jan.	1	3	51	11	5	22	49	1	28	17	♓20	47	17	♓20	49	18	+2	1
	3	5	27	2	5	24	41	2	24	56	♈19	12	52	♈19	13	17	+0	25
	4	6	15	8	5	25	37	3	7	38	♉ 2	45	40	♉ 2	45	26	—0	14
	6	7	54	32	5	27	29	4	1	54	♉28	48	5	♉28	47	47	—0	18
	7	8	45	37	5	28	25	4	13	32	♊11	25	27	♊11	25	20	—0	7
	8	9	36	43	5	29	21	4	24	55	♊23	51	22	♊23	51	33	+0	11
	16	15	33	40	6	6	46	7	23	50	♎ 2	14	55	♎ 2	10	52	—4	3
	19	17	52	20	6	9	33	9	0	39	♏11	44	0	♏11	41	9	—2	51
	20	18	46	34	6	10	29	9	13	47	♏25	41	38	♏25	37	30	—4	8
	22	20	47	16	6	12	21	10	11	22	♐25	2	16	♐24	58	4	—4	12
Jan.	29	2	28	24	6	17	56	1	7	27	♓28	21	44	♓28	24	45	+3	1
Feb.	1	4	58	12	6	20	43	2	17	7	♉11	2	5	♉11	2	19	+0	14
	2	5	49	14	6	21	39	2	29	32	♉24	17	28	♉24	16	55	—0	33
	3	6	40	50	6	22	34	3	11	36	♊ 7	9	56	♊ 7	8	45	—1	11
	4	7	32	20	6	23	30	3	23	21	♊19	44	6	♊19	42	49	—1	17
	5	8	22	55	6	24	25	4	4	50	♋ 2	4	52	♋ 2	4	4	—0	48
	6	9	11	55	6	25	20	4	15	58	♋14	17	46	♋14	17	6	—0	40
	7	9	58	52	6	26	16	4	27	12	♋26	27	24	♋26	26	16	—1	8
	8	10	43	43	6	27	11	5	8	27	♌ 8	37	18	♌ 8	35	12	—2	6
	9	11	26	45	6	28	6	5	19	13	♌20	50	26	♌20	47	24	—3	2
	12	13	33	15	7	0	51	6	22	47	♍28	15	27	♍28	10	10	—5	17
	13	14	16	0	7	1	46	7	4	24	♎11	4	10	♎10	59	0	—5	10

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXI. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Mart.	2	4	31	55	7	16	28	2	8	46	♊ 1	53	56	♊ 1	55	4	+1	8
	3	5	24	46	7	17	22	2	20	56	♊ 14	52	31	♊ 14	51	38	−0	53
	5	7	6	34	7	19	12	3	14	35	♋ 9	50	41	♋ 9	49	42	−0	59
	6	7	54	22	7	20	7	3	25	47	♋ 22	2	57	♋ 22	1	54	−1	3
	7	8	39	57	7	21	1	4	7	3	♌ 4	12	20	♌ 4	11	26	−0	54
	9	10	5	47	7	22	50	4	29	28	♌ 28	40	45	♌ 28	38	56	−1	49
	10	10	47	20	7	23	44	5	10	43	♍ 11	8	15	♍ 11	5	14	−3	1
	13	12	58	44	7	26	27	6	15	32	♎ 19	50	28	♎ 19	44	43	−5	45
	14	13	46	21	7	27	21	6	27	39	♏ 3	12	25	♏ 3	7	1	−5	24
	16	15	31	58	7	29	10	7	22	56	♐ 0	39	35	♐ 0	34	31	−5	4
: :	19	18	27	28	8	1	54	9	3	26	♑ 13	30	28	♑ 13	23	46	−6	42
	22	21	12	19	8	4	37	10	15	33	♒ 28	2	23	♒ 27	57	10	−5	13
	29	2	19	22	8	10	1	1	5	50	♉ 25	41	34	♉ 25	41	39	+0	5
	30	3	13	24	8	10	56	1	18	12	♊ 9	6	29	♊ 9	5	52	−0	37
Mart.	31	4	6	46	8	11	50	2	0	19	♊ 22	7	10	♊ 22	6	27	−0	43
Apri.	2	5	48	40	8	13	37	2	23	49	♋ 17	9	43	♋ 17	10	31	+0	48
	5	8	1	13	8	16	18	3	28	6	♌ 23	47	56	♌ 23	46	53	−1	3
	6	8	42	50	8	17	12	4	9	31	♍ 6	8	48	♍ 6	7	22	−1	26
	9	10	51	2	8	19	52	5	14	36	♎ 14	38	55	♎ 14	36	24	−2	31
Cent.	10	11	39	16	8	20	46	5	26	45	♎ 28	6	40	♎ 28	3	2	−3	38
	12	13	25	40	8	22	33	6	22	2	♏ 25	55	8	♏ 25	50	54	−4	14
	14	15	22	58	8	24	21	7	18	35	♐ 24	35	28	♐ 24	32	28	−3	0
: :	16	17	20	10	8	26	8	8	16	6	♑ 23	44	31	♑ 23	40	39	−3	52
Apri.	27	1	55	22	9	5	2	0	28	26	♊ 16	23	12	♊ 16	21	32	−1	40
Maii.	4	7	18	39	9	11	13	3	19	28	♍ 13	22	23	♍ 13	21	12	−1	11
	5	8	0	10	9	12	6	4	1	10	♍ 25	57	19	♍ 25	56	31	−0	48
	6	8	43	14	9	12	59	4	13	5	♎ 8	51	17	♎ 8	50	12	−1	5
	7	9	28	55	9	13	52	4	25	16	♎ 22	7	31	♎ 22	5	51	−1	40
: :	8	10	18	12	9	14	45	5	7	46	♏ 5	47	37	♏ 5	45	42	−1	55
	9	11	11	42	9	15	38	5	20	37	♏ 19	51	50	♏ 19	50	37	−1	13
	12	14	13	40	9	18	18	7	1	4	♑ 3	53	54	♑ 3	53	10	−0	44
	13	15	13	37	9	19	11	7	15	2	♑ 18	51	13	♑ 18	50	56	−0	17
	14	16	10	41	9	20	4	7	29	5	♒ 3	48	1	♒ 3	46	55	−1	6
	17	18	43	58	9	22	42	9	10	52	♓ 17	54	54	♓ 17	51	35	−3	19

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno Juliano MDCCXXXI. Currente.

Tranſitûs Limbi Lunæ T. æq.					Argument. Annuum.			Diſtantia ☾ à ☉			Longitudo Centri Lunæ Obſervata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	H.	D.	'	''	S.	°	'	S.	°	'	°	'	''	°	'	''	'	''
Maii.	19	20	20	37	9	24	28	10	7	42	♈16	30	20	♈16	26	48	—3	32
	20	21	10	17	9	25	21	10	20	41	♉ 0	29	47	♉ 0	27	1	—2	46
	21	22	1	34	9	26	14	11	3	20	♉14	15	51	♉14	14	14	—1	37
	30	4	33	7	10	3	15	2	6	40	♌26	7	4	♌26	5	21	—1	43
Maii.	31	5	14	0	10	4	8	2	18	5	♍ 8	19	32	♍ 8	18	56	—0	36
Junii.	1	5	54	43	10	5	0	2	29	38	♍20	40	5	♍20	39	50	—0	15
	4	8	6	44	10	7	38	4	5	46	♎29	24	14	♎29	22	24	—1	50
	5	8	59	40	10	8	30	4	18	31	♏13	8	28	♏13	6	55	—1	33
	6	9	53	9	10	9	23	5	1	37	♏27	20	25	♏27	18	4	—2	21
	7	10	55	18	10	10	16	5	15	9	♐12.	0	44	♐11	59	27	—1	17
Cent.	8	11	56	21	10	11	9	5	28	59	♐27	2	49	♐27	1	40	—1	9
	14	17	29	58	10	16	26	8	23	53	♓27	56	15	♓27	55	0	—1	15
	26	2	30	16	10	26	4	1	6	24	♌21	39	0	♌21	36	36	—2	24
Junii.	27	3	11	21	10	26	56	1	17	34	♍ 3	48	37	♍ 3	46	33	—2	4
Julii.	2	6	46	15	11	1	18	3	16	24	♏ 6	54	5	♏ 6	52	55	—1	10
	3	7	38	15	11	2	11	3	29	12	♏20	32	46	♏20	31	28	—1	18
	4	8	34	49	11	3	4	4	12	27	♐ 4	42	19	♐ 4	40	24	—1	55
	5	9	35	14	11	3	57	4	26	7	♐19	22	44	♐19	20	30	—2	14
	6	10	37	42	11	4	50	5	10	10	♑ 4	31	21	♑ 4	29	1	—2	20
	9	13	38	41	11	7	29	6	23	34	♒21	28	41	♒21	29	21	+0	40
	11	15	23	41	11	9	15	7	22	17	♓22	21	17	♓22	22	23	+1	6
::	12	16	13	52	11	10	8	8	6	15	♈ 7	14	23	♈ 7	15	53	+1	30
	14	17	54	44	11	11	53	9	3	7	♉ 5	44	40	♉ 5	44	2	—0	38
	15	18	46	28	11	12	46	9	15	57	♉19	22	27	♉19	20	46	—1	41
	17	20	31	44	11	14	32	10	10	28	♊15	35	32	♊15	33	23	—2	9
	18	21	23	40	11	15	24	10	22	13	♊28	17	38	♊28	16	9	—1	29
Cent.::	27	3	13	10	11	22	25	1	21	33	♎ 6	30	47	♎ 6	31	54	+1	7
Julii.	28	3	54	59	11	23	18	2	3	9	♎19	4	16	♎19	5	1	+0	45
Cent.::	30	5	30	18	11	25	4	2	27	26	♏14	59	38	♏15	1	4	+1	26
Aug. ::	2	8	18	51	11	27	44	4	7	5	♐27	1	57	♐27	0	13	—1	44
	4	10	20	21	11	29	30	5	5	30	♑27	27	50	♑27	25	1	—2	49
	6	12	14	42	0	1	3	6	4	37	♒29	4	56	♒29	1	27	—3	29
	8	14	3	13	0	3	4	7	3	33	♈ 0	28	45	♈ 0	28	18	—0	27
	9	14	55	12	0	3	57	7	17	37	♈15	39	2	♈15	38	31	—0	31

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXI. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Aug.	10	15	47	25	0	4	50	8	1	20	♉ 0	19	36	♉ 0	19	4	−0	32
	11	16	40	24	0	5	44	8	14	39	♉ 14	30	49	♉ 14	28	28	−2	21
	13	18	27	19	0	7	30	9	10	3	♊ 11	24	56	♊ 11	22	0	−2	56
	25	2	38	33	0	17	17	1	14	44	♎ 27	48	28	♎ 27	49	3	+0	35
	27	4	16	19	0	19	3	2	8	58	♏ 23	52	3	♏ 23	53	9	+1	6
	28	5	10	15	0	19	57	2	21	39	♐ 7	19	31	♐ 7	20	5	+0	34
Aug.	30	7	5	32	0	21	45	3	18	22	♑ 5	28	5	♑ 5	28	42	+0	37
Sept.	1	9	1	49	0	23	33	4	16	29	♒ 5	20	53	♒ 5	18	16	−2	37
	2	9	58	51	0	24	27	5	0	54	♒ 20	50	12	♒ 27	47	45	−2	27
	3	10	53	9	0	25	21	5	15	22	♓ 6	32	58	♓ 6	30	7	−2	51
Cent.	4	11	46	24	0	26	15	5	29	47	♓ 22	18	1	♓ 22	15	42	−2	19
Cent.	5	12	39	24	0	27	8	6	14	3	♈ 7	54	47	♈ 7	52	46	−2	1
	7	14	28	16	0	28	57	7	11	47	♉ 8	3	17	♉ 8	1	34	−1	43
	8	15	23	22	0	29	51	7	25	7	♉ 22	23	32	♉ 22	21	13	−2	19
	9	16	18	32	1	0	45	8	8	2	♊ 7	11	34	♊ 6	8	22	−3	12
	10	17	12	52	1	1	39	8	20	35	♊ 19	30	27	♊ 19	26	22	−4	5
	11	18	5	20	1	2	33	9	2	45	♋ 2	23	32	♋ 2	19	53	−3	39
	12	18	55	18	1	3	27	9	14	35	♋ 14	57	35	♋ 14	54	18	−3	17
	14	20	27	8	1	5	15	10	7	28	♌ 9	30	1	♌ 9	28	33	−1	28
	17	22	31	51	1	7	57	11	10	50	♍ 16	6	50	♍ 16	7	26	+0	36
	26	4	58	34	1	15	11	2	16	36	♑ 0	40	30	♑ 0	44	57	+4	27
	29	7	45	58	1	17	55	3	27	49	♒ 14	10	28	♒ 14	10	24	−0	4
Sept.	30	8	38	57	1	18	50	4	11	57	♒ 29	16	33	♒ 29	14	58	−1	35
Octo.	1	9	31	0	1	19	45	4	26	8	♓ 14	34	32	♓ 14	32	42	−1	50
	2	10	23	4	1	20	39	5	10	17	♓ 29	59	13	♓ 29	56	38	−2	35
	3	11	15	50	1	21	34	5	24	17	♈ 15	20	9	♈ 15	17	23	−2	46
	5	13	7	48	1	23	24	6	21	35	♉ 15	16	47	♉ 15	14	53	−1	54
	6	14	4	20	1	24	19	7	4	46	♉ 29	39	3	♉ 29	35	49	−3	14
	8	15	55	19	1	26	9	8	0	4	♊ 26	54	50	♊ 26	50	40	−4	10
	9	16	47	27	1	27	4	8	12	13	♋ 9	52	38	♋ 9	48	16	−4	22
	10	17	36	32	1	27	59	8	24	9	♋ 22	30	11	♋ 22	25	39	−4	32
	11	18	22	34	1	28	53	9	5	41	♌ 4	52	20	♌ 4	47	57	−4	23
	14	20	28	40	2	1	37	10	9	41	♍ 11	29	10	♍ 11	27	12	−1	58
	15	21	9	33	2	2	32	10	20	58	♍ 23	49	26	♍ 23	48	14	−1	12

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXI. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Octo.	22	1	57	2	2	8	2	1	2	18	♐12	32	17	♐12	34	30	+2	13
	23	2	54	8	2	8	58	1	15	12	♐26	28	44	♐26	31	54	+3	10
	24	3	51	18	2	9	53	1	28	25	♑10	36	59	♑10	40	12	+3	13
	26	5	44	42	2	11	45	2	25	38	♒ 9	24	3	♒ 9	27	48	+3	45
	27	6	32	53	2	12	40	3	9	27	♒24	0	12	♒24	2	1	+1	49
Cent.	28	7	24	33	2	13	35	3	23	23	♓ 8	46	1	♓ 8	47	30	+1	29
	29	8	13	37	2	14	30	4	7	17	♓23	38	51	♓23	38	20	−0	31
	30	9	4	17	2	15	26	4	21	6	♈ 8	33	31	♈ 8	32	49	−0	42
Octo.	31	9	56	23	2	16	21	5	4	45	♈23	25	45	♈23	24	52	−0	53
Nov.	1	10	50	23	2	17	16	5	18	11	♉ 8	9	29	♉ 8	8	27	−1	2
Cent.	2	11	47	20	2	18	12	6	1	21	♉22	38	50	♉22	37	53	−0	57
	4	13	41	32	2	20	4	6	26	47	♊20	35	30	♊20	33	8	−2	22
	5	14	35	52	2	21	0	7	9	2	♋ 3	58	4	♋ 3	54	44	−3	20
	7	16	15	16	2	22	51	8	2	46	♋29	37	24	♋29	32	56	−4	28
	11	19	4	31	2	26	32	9	18	31	♍18	41	57	♍18	39	39	−2	18
	23	4	30	6	3	6	46	2	7	14	♒19	37	57	♒19	40	10	+2	13
	25	6	10	24	3	8	38	3	4	57	♓19	0	19	♓19	1	7	+0	48
Nov.	29	9	35	12	3	12	22	4	28	42	♉16	43	0	♉16	42	29	−0	31
Cent.	2	12	22	41	3	15	10	6	6	14	♊27	59	55	♊27	58	27	−1	28
Dec.	4	14	6	35	3	17	2	6	29	53	♋24	4	51	♋24	2	11	−2	40
	5	14	53	17	3	17	58	7	11	24	♌ 6	42	25	♌ 6	39	21	−3	4
	6	15	37	10	3	18	54	7	22	47	♌19	6	53	♌19	3	59	−2	54
	7	16	19	1	3	19	50	8	4	5	♍ 1	22	58	♍ 1	20	2	−2	56
	8	16	59	40	3	20	45	8	15	23	♍13	35	1	♍13	32	17	−2	44
	9	17	40	9	3	21	41	8	26	45	♍25	48	10	♍25	46	3	−2	7
	13	20	40	33	3	25	24	10	14	3	♏16	44	47	♏16	43	14	−1	33
	21	3	16	6	4	1	58	1	18	13	♒29	17	30	♒29	18	43	+1	13
	24	5	47	23	4	4	46	2	29	58	♈13	47	38	♈13	47	9	−0	29
	25	6	38	13	4	5	42	3	13	29	♈28	7	39	♈28	6	44	−0	55
	26	7	30	30	4	6	38	3	26	42	♉12	12	21	♉12	10	56	−1	25
	27	8	24	16	4	7	34	4	9	35	♉26	1	58	♉26	0	22	−1	36
	29	10	13	21	4	9	27	5	4	22	♊22	57	7	♊22	55	59	−1	8
Cent.	31	11	58	13	4	11	19	5	27	55	♋18	57	43	♋18	56	55	−1	8

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Jan.	:: 4	14	56	0	4	15	2	7	12	51	♍ 8	45	18	♍ 8	43	32	—1	46
	:: 5	15	36	21	4	15	58	7	23	59	♍20	55	50	♍20	55	28	—0	22
	8	17	42	45	4	18	44	8	28	16	♎27	56	38	♎27	56	15	—0	23
	9	18	29	40	4	19	40	9	10	13	♏10	42	13	♏10	41	37	—0	36
	10	19	20	13	4	20	36	9	22	30	♏23	49	42	♏23	48	42	—1	0
	11	20	14	31	4	21	32	10	5	11	♐ 7	23	16	♐ 7	22	26	—0	50
	12	21	12	6	4	22	28	10	18	16	♐21	27	25	♐21	26	30	—0	55
	:: 20	3	41	48	4	29	0	1	26	49	♈ 8	32	1	♈ 8	33	21	+1	20
Cent.	::21	4	34	58	4	29	56	2	10	45	♈23	22	6	♈23	24	28	+2	22
	22	5	26	49	5	0	52	2	24	21	♉ 7	50	28	♉ 7	49	10	—1	18
	:: 24	7	15	4	5	2	44	3	20	27	♊ 5	31	43	♊ 5	28	26	—3	17
	27	9	52	59	5	5	31	4	26	47	♋14	40	15	♋14	38	29	—1	46
	28	10	41	15	5	6	27	5	8	15	♋27	17	0	♋27	15	36	—1	24
Jan.	31	12	54	5	5	9	13	6	11	33	♍ 4	24	36	♍ 4	21	16	—3	20
Feb.	2	14	15	17	5	11	3	7	3	28	♍28	49	49	♍28	46	10	—3	39
	3	14	56	25	5	11	58	7	14	35	♎11	2	47	♎11	0	15	—2	32
	:: 6	17	11	57	5	14	44	8	19	17	♏18	30	41	♏18	30	0	—0	41
	7	18	3	10	5	15	39	9	1	32	♐ 1	31	38	♐ 1	30	44	—0	54
	8	18	57	26	5	16	35	9	14	12	♐14	55	48	♐14	55	17	—0	31
	17	2	22	36	5	23	58	1	6	47	♈16	43	0	♈16	44	54	+1	54
	19	4	12	57	5	25	49	2	4	40	♉16	38	33	♉16	37	48	—0	45
	21	6	4	22	5	27	39	3	0	59	♊14	32	10	♊14	29	3	—3	7
	22	6	58	21	5	28	35	3	13	31	♊27	48	15	♊27	44	44	—3	31
	24	8	38	58	6	0	24	4	7	24	♋23	21	38	♋23	18	39	—2	59
	25	9	25	10	6	1	19	4	18	51	♌ 5	48	24	♌ 5	45	52	—2	32
	26	10	10	5	6	2	14	5	0	5	♌18	8	50	♌18	5	40	—3	10
Feb.	28	11	31	54	6	4	3	5	22	3	♍12	34	33	♍12	31	30	—3	3
Cent.	29	12	13	30	6	4	57	6	2	57	♍24	47	30	♍24	44	8	—3	22
Mart.	2	13	37	52	6	6	46	6	24	59	♎19	21	10	♎19	17	12	—3	58
	3	14	22	7	6	7	41	7	6	14	♏ 1	46	28	♏ 1	41	49	—4	39
	6	16	50	15	6	10	25	8	11	46	♐10	5	13	♐10	2	4	—3	9
	9	19	35	52	6	13	9	9	20	50	♑21	22	18	♑21	18	22	—3	56
	10	20	31	11	6	14	4	10	4	40	♒ 6	3	41	♒ 5	59	3	—4	38
	11	21	25	42	6	14	58	10	18	48	♒21	12	55	♒21	8	20	—4	35

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

Tranſitûs Limbi Lunæ T. æq.	*Argument. Annuum.*	*Diſtantia* ☾ à ☉	*Longitudo Centri Lunæ Obſervata.*	*Longitudo Centri Lunæ Comput.*	*Error Comp.*
M. H. D. ′ ″	S. ° ′	S. ° ′	♀ ′ ″	♀ ′ ″	′ ″
Mart. 20 4 49 59	6 22 15	2 11 7	♊22 42 10	♊22 40 35	—1 35
22 6 34 45	6 24 3	3 5 57	♋19 1 48	♋18 58 56	—2 52
23 7 22 14	6 24 57	3 17 48	♌ 1 38 39	♌ 1 36 37	—2 2
24 8 7 1	6 25 51	3 29 21	♌14 3 33	♌14 1 20	—2 13
25 8 49 33	6 26 45	4 10 40	♌26 19 10	♌26 17 23	—1 47
26 9 30 44	6 27 39	4 21 49	♍ 8 31 3	♍ 8 29 24	—1 39
27 10 11 22	6 28 32	5 2 52	♍20 42 32	♍20 41 1	—1 31
Mart. 28 10 52 16	6 29 26	5 13 52	♎ 2 56 37	♎ 2 55 7	—1 30
Cent.::29 11 35 18	7 0 20	5 24 57	♎15 16 28	♎15 14 44	—1 44
Apri. :: 2 14 46 48	7 3 55	7 10 59	♐ 6 3 32	♐ 5 58 52	—4 40
:: 15 1 36 42	7 14 41	0 24 43	♊ 1 42 46	♊ 1 42 26	—0 20
Cent.:: 17 3 33 24	7 16 28	1 21 7	♋ 0 9 16	♋ 0 9 11	—0 5
19 5 15 53	7 18 15	2 16 0	♋26 40 39	♋26 39 46	—0 53
23 8 8 54	7 21 47	4 2 20	♍16 18 21	♍16 18 15	—0 6
25 9 31 15	7 23 33	4 24 47	♎10 49 1	♎10 49 2	+0 1
27 11 0 9	7 25 19	5 17 29	♏ 5 51 30	♏ 5 50 9	—1 21
Apri. 29 12 40 59	7 27 6	6 10 56	♐ 1 43 54	♐ 1 40 28	—3 26
Maii. 7 19 43 43	8 4 11	9 26 19	♓24 28 2	♓24 20 3	—7 59
8 20 35 16	8 5 4	10 10 24	♈ 9 29 35	♈ 9 21 35	—8 0
:: 9 21 28 39	8 5 57	10 24 27	♈24 33 55	♈24 27 59	—5 56
14 1 17 9	8 9 30	0 18 42	♊23 28 48	♊23 26 48	—2 0
16 3 5 49	8 11 16	1 13 58	♋20 51 6	♋20 50 8	—0 58
17 3 54 48	8 12 9	1 26 7	♌ 3 56 16	♌ 3 55 28	—0 48
19 5 23 31	8 13 54	2 19 41	♌29 10 15	♌29 10 26	+0 11
20 6 5 0	8 14 46	3 1 11	♍11 29 37	♍11 29 43	+0 6
25 9 41 12	8 19 9	4 28 38	♏13 32 46	♏13 32 54	+0 8
27 11 24 57	8 20 54	5 22 42	♐ 9 53 10	♐ 9 51 54	—1 16
Maii. 31 15 8 6	8 24 26	7 14 17	♒ 6 0 39	♒ 5 57 10	—3 29
Junii. 1 16 0 10	8 25 19	7 27 51	♒20 32 8	♒20 28 31	—3 37
2 16 50 44	8 26 11	8 11 37	♓ 5 9 42	♓ 5 6 4	—3 38
3 17 40 40	8 27 4	8 25 31	♓19 51 50	♓19 47 35	—4 15
:: 6 20 15 41	8 29 42	10 7 11	♉ 4 1 11	♉ 3 55 54	—5 17
15 3 17 42	9 6 44	1 18 23	♌23 54 32	♌23 54 38	+0 6
19 6 4 2	9 10 13	3 4 14	♎13 14 1	♎13 14 11	+0 10

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Junii.	21	7	32	44	9	11	58	3	27	28	♏ 8	3	36	♏ 8	5	8	+1	32
	22	8	21	22	9	12	50	4	9	26	♏20	50	35	♏20	52	6	+1	31
	23	9	13	15	9	13	43	4	21	32	♐ 3	58	20	♐ 3	59	18	+0	58
	24	10	7	57	9	14	36	5	4	0	♐17	29	31	♐17	29	41	+0	10
	25	11	4	22	9	15	29	5	16	47	♑ 1	24	13	♑ 1	24	10	—0	3
Junii.	29	14	46	18	9	19	0	7	10	49	♓ 0	11	19	♓ 0	9	33	—1	46
Julii.	2	17	19	38	9	21	38	8	22	51	♈14	57	41	♈14	54	1	—3	40
	6	20	58	32	9	25	9	10	16	58	♊12	18	24	♊12	13	55	—4	29
	14	2	37	31	10	1	18	1	10	37	♍13	50	26	♍13	50	31	+0	5
: :	15	3	18	32	10	2	10	1	21	53	♍26	7	28	♍26	8	20	+0	52
: :	17	4	41	54	10	3	55	2	14	32	♎20	32	35	♎20	35	3	+2	28
	20	7	1	59	10	6	33	3	19	47	♏28	4	48	♏28	6	53	+2	5
	23	9	46	0	10	9	12	4	27	44	♑ 8	49	1	♑ 8	47	36	—1	25
	24	10	42	43	10	10	5	5	11	9	♑23	20	20	♑23	19	23	—0	57
	25	11	38	39	10	10	58	5	24	52	♒ 8	17	45	♒ 8	14	44	—3	1
	28	14	21	35	10	13	38	7	7	18	♓24	27	48	♓24	26	26	—1	22
	30	16	7	46	10	15	24	8	5	44	♈24	52	16	♈24	50	1	—2	15
Julii.	31	17	2	20	10	16	17	8	19	42	♉ 9	37	46	♉ 9	34	50	—2	56
Aug.	1	17	58	4	10	17	10	9	3	24	♉24	2	38	♉23	58	55	—3	43
	2	18	54	18	10	18	4	9	16	45	♊ 8	6	56	♊ 8	2	53	—4	3
	3	19	50	5	10	18	57	9	29	44	♊21	52	10	♊21	48	14	—3	56
	5	21	35	57	10	20	43	10	24	34	♋18	31	36	♋18	30	4	—1	32
	18	6	37	1	11	1	20	3	12	27	♐18	41	24	♐18	43	2	+1	38
	19	7	31	27	11	2	14	3	25	9	♑ 2	10	33	♑ 2	10	22	—0	11
	20	8	26	46	11	3	8	4	8	15	♑16	9	7	♑16	7	23	—1	44
	22	10	17	11	11	4	55	5	5	37	♒15	41	46	♒15	37	49	—3	57
	25	13	2	6	11	7	36	6	18	41	♈ 2	43	17	♈ 2	39	59	—3	18
	26	13	57	7	11	8	30	7	3	11	♈18	25	45	♈18	22	57	—2	48
	27	14	53	17	11	9	24	7	17	32	♉ 3	50	55	♉ 3	48	37	—2	18
	28	15	50	34	11	10	18	8	1	40	♉18	52	41	♉18	49	55	—2	46
Aug.	29	16	48	15	11	11	12	8	15	27	♊ 3	27	0	♊ 3	23	37	—3	23
Sept.	1	19	33	4	11	13	53	9	24	22	♋14	32	17	♋14	29	25	—2	52
	2	20	22	35	11	14	47	10	6	30	♋27	31	54	♋27	30	13	—1	41
	4	21	53	21	11	16	34	10	29	45	♌22	50	7	♌22	51	23	+1	16

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

Tranſitûs Limbi Lunæ T. æq.					Argument. Annuum.			Diſtantia ☾ à ☉			Longitudo Centri Lunæ Obſervata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	H.	D.	'	''	S.	°	'	S.	°	'	°	'	''	°	'	''	'	''
Sept.	15	5	22	4	11	25	33	2	22	57	♐ 26	47	14	♐ 26	50	53	+3	39
	16	6	15	17	11	26	27	3	5	34	♑ 10	9	0	♑ 10	10	47	+1	47
	18	8	2	10	11	28	16	4	2	3	♒ 8	18	16	♒ 8	16	24	−1	52
	19	8	55	22	11	29	10	4	15	53	♒ 23	10	24	♒ 23	6	15	−4	9
	21	10	42	25	0	0	59	5	14	28	♓ 14	14	18	♓ 14	8	10	−6	8
	22	11	37	28	0	1	54	5	29	2	♈ 10	8	41	♈ 10	3	5	−5	36
	24	13	32	58	0	3	43	6	28	4	♉ 11	43	38	♉ 11	39	43	−3	55
	25	14	35	6	0	4	38	7	12	19	♉ 27	4	0	♉ 26	59	46	−4	14
	28	17	27	31	0	7	22	8	22	42	♋ 9	56	45	♋ 9	52	27	−4	18
	29	18	18	57	0	8	17	9	5	16	♋ 23	16	11	♋ 23	12	10	−4	1
Sept.	30	19	6	57	0	9	12	9	17	26	♌ 6	13	9	♌ 6	9	54	−3	15
Octo.	1	19	51	56	0	10	6	9	29	14	♌ 18	51	41	♌ 18	50	31	−1	10
	3	21	16	15	0	11	55	10	21	58	♍ 13	36	35	♍ 13	38	10	+1	35
	14	5	1	59	0	21	2	2	16	19	♑ 18	57	45	♑ 19	0	46	+3	1
	15	5	43	40	0	21	57	2	29	14	♒ 2	41	1	♒ 2	42	25	+1	24
	17	7	35	52	0	23	47	3	26	14	♓ 1	24	5	♓ 1	21	38	−2	27
	18	8	27	22	0	24	42	4	10	15	♓ 16	25	8	♓ 16	21	17	−3	51
	19	9	20	13	0	25	38	4	24	30	♈ 1	49	43	♈ 1	44	18	−5	25
	20	10	15	7	0	26	33	5	8	55	♈ 17	29	18	♈ 17	23	47	−5	31
	21	11	12	35	0	27	28	5	23	23	♉ 3	14	46	♉ 3	9	45	−5	1
	24	14	16	51	1	0	15	7	5	46	♊ 19	19	10	♊ 19	15	28	−3	42
	25	15	15	13	1	1	11	7	19	13	♋ 3	47	45	♋ 3	44	6	−3	39
	29	18	32	2	1	4	52	9	8	57	♌ 26	55	10	♌ 26	52	26	−2	44
Octo.	30	19	14	17	1	5	47	9	20	32	♍ 9	21	55	♍ 9	19	36	−2	19
Nov.	10	2	58	55	1	15	2	1	14	47	♑ 14	54	17	♑ 14	54	55	+0	38
	13	5	30	32	1	17	49	2	23	28	♒ 26	18	6	♒ 26	19	16	+1	10
	15	7	10	10	1	19	40	3	20	51	♓ 25	23	36	♓ 25	25	26	+1	50
	19	10	53	4	1	23	24	5	17	18	♉ 26	13	28	♉ 26	11	15	−2	13
Cent.	20	11	55	21	1	24	20	6	1	13	♊ 11	25	10	♊ 11	22	55	−2	15
	22	13	54	50	1	26	13	6	28	7	♋ 10	48	15	♋ 10	45	10	−3	5
	23	14	48	56	1	27	9	7	11	0	♋ 24	50	14	♋ 24	49	46	−0	28
	24	15	39	3	1	28	5	7	23	32	♌ 8	24	40	♌ 8	22	54	−1	46
	25	16	25	37	1	29	0	8	5	43	♌ 21	33	19	♌ 21	31	5	−2	14
	27	17	51	36	2	0	52	8	29	15	♍ 16	49	46	♍ 16	48	2	−1	44

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	.	°	′	″	°	′	″	′	″
Nov.	28	18	33	1	2	1	47	9	10	42	♍29	8	14	♍29	6	30	−1	44
	29	19	14	37	2	2	43	9	22	2	♎11	20	16	♎11	19	15	−1	1
Nov.	30	19	57	18	2	3	39	10	3	19	♎23	31	58	♎23	31	28	−0	30
Dec.	9	2	38	5	2	11	6	1	8	21	♒ 7	56	30	♒ 7	55	31	−0	59
	10	3	28	27	2	12	2	1	21	23	♒22	3	30	♒22	3	23	−0	7
	11	4	17	56	2	12	58	2	4	42	♓ 6	21	34	♓ 6	21	23	−0	11
	13	5	57	15	2	14	50	3	2	1	♈ 5	24	9	♈ 5	22	31	−1	38
	17	9	38	18	2	18	35	4	27	27	♊ 4	31	1	♊ 4	27	50	−3	11
	22	14	16	9	2	23	17	7	2	5	♌15	24	29	♌15	23	45	−0	44
	29	19	20	53	2	29	47	9	23	7	♏12	57	30	♏12	56	44	−0	46

Anno JULIANO MDCCXXXIII. Currente.

M.	D.	H.	′	″	S.	°	′	S.	°	.	°	′	″	°	′	″	′	″
Jan.	8	3	4	13	3	8	11	1	15	51	♓16	10	17	♓16	10	4	−0	13
	9	3	54	48	3	9	7	1	29	36	♈ 0	57	6	♈ 0	56	52	−0	14
	10	4	46	13	3	10	3	2	13	28	♈15	42	31	♈15	41	40	−0	51
	11	5	39	9	3	10	59	2	27	22	♉ 0	23	23	♉ 0	22	6	−1	17
	12	6	34	2	3	11	55	3	11	12	♉14	59	0	♉14	57	0	−2	0
	14	8	28	24	3	13	47	4	8	23	♊13	49	34	♊13	47	8	−2	26
	15	9	25	50	3	14	45	4	21	37	♊28	2	16	♊28	0	27	−1	49
	16	10	23	55	3	15	39	5	4	32	♋12	4	38	♋12	4	23	−0	15
Jan.	17	11	14	46	3	16	35	5	17	5	♋25	52	42	♋25	52	41	−0	1
Feb.	5	1	48	20	4	3	15	0	26	33	♓25	5	30	♓25	5	41	+0	11
	9	5	26	32	4	6	57	2	22	45	♉25	8	47	♉25	7	0	−1	47
	10	6	24	0	4	7	53	3	6	27	♊ 9	33	42	♊ 9	31	13	−2	29
	11	7	20	58	4	8	48	3	19	50	♊23	40	47	♊23	39	23	−1	24
	12	8	16	31	4	9	44	4	2	53	♋ 7	35	18	♋ 7	32	32	−2	46
	13	9	9	30	4	10	39	4	15	33	♋21	13	7	♋21	11	34	−1	33
	14	9	59	40	4	11	34	4	27	52	♌ 4	37	46	♌ 4	36	56	−0	50
Feb.	28	20	57	10	4	24	22	10	11	33	♒ 2	43	8	♒ 2	41	24	−1	44
Mart.	10	5	15	26	5	2	36	2	17	52	♊19	10	33	♊19	9	33	−1	0
	14	8	45	3	5	6	14	4	9	9	♌13	44	21	♌13	43	14	−1	7

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Mart.	15	9	30	22	5	7	8	4	21	0	♌26	39	4	♌26	38	31	—0	33
	17	10	56	18	5	8	56	5	13	52	♍21	53	30	♍21	53	4	—0	26
Mart.	27	18	46	30	5	17	57	9	8	25	♑26	39	6	♈26	33	42	—5	24
Apri.	6	3	2	34	5	26	3	1	14	54	♊12	57	18	♊12	58	51	+1	33
	7	4	2	35	5	26	57	1	28	53	♊27	50	2	♊27	51	25	+1	23
	11	7	28	48	6	0	32	3	20	27	♌22	37	48	♌22	37	59	+0	11
	12	8	12	50	6	1	25	4	2	29	♍ 5	24	15	♍ 5	24	46	+0	31
	13	8	55	25	6	2	19	4	13	52	♍17	56	48	♍17	57	45	+0	57
	15	10	19	30	6	4	5	5	6	18	♎12	34	56	♎12	35	40	+0	44
Cent.	17	11	47	54	6	5	52	5	28	17	♏ 6	58	50	♏ 6	56	42	—2	8
	22	15	51	20	6	10	18	7	24	54	♑ 9	0	36	♑ 8	54	45	—5	51
	23	16	41	12	6	11	12	8	6	59	♑21	58	34	♑21	52	19	—6	15
	25	18	19	41	6	12	58	9	2	18	♒18	55	5	♒18	48	10	—6	55
	26	19	8	56	6	13	51	9	15	34	♓ 3	0	57	♓ 2	53	5	—7	52
Apri.	27	19	58	54	6	14	44	9	29	15	♓17	32	3	♓17	26	41	—5	22
Maii.	5	2	45	35	6	20	58	1	9	36	♋ 5	36	20	♋ 5	38	45	+2	25
	6	3	42	30	6	21	52	1	23	12	♋20	11	33	♋20	13	28	+1	55
	13	9	0	33	6	28	1	4	17	39	♎20	43	47	♎20	45	36	+1	49
	15	10	29	44	6	29	47	5	9	52	♏15	5	22	♏15	5	20	—0	2
Cent.	16	11	18	0	7	0	39	5	20	59	♏27	21	38	♏27	20	33	—1	5
	20	14	38	32	7	4	11	7	6	58	♑17	57	2	♑17	51	32	—5	30
	21	15	28	0	7	5	3	7	19	6	♒ 1	7	0	♒ 1	0	27	—6	33
	22	16	16	42	7	5	56	8	1	35	♒14	32	20	♒14	25	36	—6	44
	23	17	4	58	7	6	49	8	14	26	♒28	15	38	♒28	8	15	—7	23
Maii.	27	20	27	53	7	10	20	10	9	20	♈26	26	2	♈26	17	42	—8	20
Junii.	3	2	22	38	7	15	38	1	3	54	♋27	36	50	♋27	38	44	+1	54
	4	3	14	36	7	16	31	1	16	59	♌11	44	37	♌11	47	51	+3	14
	6	4	48	33	7	18	16	2	12	1	♍ 8	38	3	♍ 8	40	30	+2	27
	9	6	57	26	7	20	53	3	17	18	♎16	18	6	♎16	20	31	+2	25
	13	10	0	30	7	24	23	5	2	33	♐ 5	16	47	♐ 5	16	46	—0	1
	14	10	50	21	7	25	15	5	13	59	♐17	49	30	♐17	48	5	—1	25
Cent.	15	11	42	16	7	26	8	5	25	34	♑ 0	35	32	♑ 0	33	5	—2	27
	20	15	21	29	8	0	31	7	27	18	♓ 8	1	34	♓ 7	56	22	—5	12

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Junii.	21	16	40	1	8	1	23	8	10	35	♓22	11	1	♓22	6	3	—4	58
	22	17	29	41	8	2	16	8	24	10	♈ 6	34	3	♈ 6	27	57	—6	6
	23	18	21	19	8	3	9	9	8	1	♈21	9	7	♈21	2	0	—7	7
	24	19	15	32	8	4	1	9	22	3	♉ 5	54	36	♉ 5	47	43	—6	53
Junii.	27	22	12	48	8	6	40	11	4	20	♊20	54	12	♊20	51	8	—3	4
Julii.	6	4	52	42	8	13	41	2	16	6	♎11	20	48	♎11	23	40	+2	52
	7	5	36	8	8	14	34	2	27	40	♎22	41	53	♎23	43	44	+1	51
	10	7	53	33	8	17	11	4	2	2	♐ 0	21	57	♐ 0	23	28	+1	31
	11	8	42	40	8	18	4	4	13	34	♐12	47	59	♐12	48	54	+0	55
	12	9	33	7	8	18	57	4	25	15	♐25	28	10	♐25	28	21	+0	11
	13	10	24	22	8	19	50	5	7	6	♑ 8	26	39	♑ 8	25	5	—1	34
	14	11	15	38	8	20	42	5	19	11	♑21	43	31	♑21	40	53	—2	38
	18	14	37	35	8	24	13	7	10	16	♓17	43	8	♓17	39	36	—3	32
	20	16	18	38	8	25	59	8	7	27	♈16	46	40	♈16	43	12	—3	28
	21	17	11	44	8	26	52	8	21	21	♉ 1	25	11	♉ 1	21	21	—3	50
	22	18	7	4	8	27	45	9	5	20	♉16	5	35	♉16	1	5	—4	30
	23	19	4	31	8	28	38	9	19	19	♊ 0	46	55	♊ 0	42	0	—4	45
	24	20	3	14	8	29	31	10	3	13	♊15	26	47	♊15	22	30	—4	17
Julii.	25	21	1	53	9	0	25	10	16	55	♋ 0	3	10	♋ 0	0	12	—2	58
Aug.	1	2	3	13	9	5	43	1	3	0	♍23	17	45	♍23	18	20	+0	35
	6	5	47	28	9	10	7	3	0	42	♏25	19	55	♏25	21	28	+1	33
	7	6	34	23	9	11	0	3	12	14	♐ 7	35	47	♐ 7	36	52	+1	5
	9	8	14	14	9	12	47	4	5	45	♑ 2	46	42	♑ 2	45	53	—0	49
	11	9	56	13	9	14	33	5	0	11	♑29	18	19	♑29	15	23	—2	56
	12	10	47	3	9	15	26	5	12	49	♒13	10	36	♒13	6	23	—4	13
	13	11	38	42	9	16	19	5	25	47	♒27	25	35	♒27	21	20	—4	15
	16	14	13	36	9	19	0	7	6	23	♈11	44	16	♈11	41	21	—2	55
	18	16	2	53	9	20	47	8	4	25	♉11	36	13	♉11	34	18	—1	55
	19	17	0	10	9	21	40	8	18	29	♉26	24	25	♉26	22	8	—2	17
	23	20	47	30	9	25	15	10	12	53	♋23	56	15	♋23	55	17	—0	58
Aug.	25	22	28	0	9	27	2	11	8	12	♌21	27	54	♌21	30	5	+2	11
Sept.	1	2	54	24	10	2	23	1	17	57	♏ 8	17	46	♏ 8	19	27	+1	41
	6	6	55	40	10	6	52	3	15	38	♑10	0	13	♑10	0	12	—0	1
	7	7	44	36	10	7	46	3	27	48	♑23	3	7	♑23	1	22	—1	45

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno Juliano MDCCXXXIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Sept.	8	8	34	44	10	8	40	4	10	18	♒ 6	31	58	♒ 6	28	21	−3	37
	9	9	24	57	10	9	34	4	23	8	♒20	28	42	♒20	23	50	−4	52
	10	10	15	28	10	10	28	5	6	21	♓ 4	53	9	♓ 5	48	14	−4	55
	14	13	53	12	10	14	5	7	2	10	♉ 5	43	0	♉ 5	40	31	−2	29
	17	16	51	5	10	16	48	8	14	49	♊21	1	48	♊21	0	30	−1	18
	18	17	48	55	10	17	43	8	28	36	♋ 5	33	20	♋ 5	31	34	−1	46
	19	18	44	5	10	18	37	9	12	1	♋19	44	54	♋19	43	1	−1	53
	21	20	25	14	10	20	26	10	7	42	♌17	11	13	♌17	12	32	+1	19
Sept.::	29	1	35	55	10	26	46	0	28	16	♏16	1	58	♏16	1	0	−0	58
Octo.	1	3	10	10	10	28	38	1	20	31	♐10	20	54	♐10	20	46	−0	8
	4	5	35	54	11	1	19	2	25	15	♑17	34	42	♑17	34	45	+0	3
	5	6	24	34	11	2	13	3	7	22	♒ 0	31	18	♒ 0	30	52	−0	26
	7	8	2	13	11	4	3	4	2	45	♒27	43	25	♒27	39	35	−3	50
	8	8	52	0	11	4	58	4	16	2	♓12	3	34	♓11	58	5	−4	46
	9	9	43	23	11	5	53	4	29	44	♓26	54	55	♓26	49	0	−5	55
	10	10	37	1	11	6	48	5	13	46	♈12	12	5	♈12	5	55	−6	10
	14	14	38	42	11	10	29	7	11	38	♊14	52	53	♊14	50	56	−1	57
	15	15	39	34	11	11	24	7	25	52	♋ 0	4	37	♋ 0	3	5	−1	32
	16	16	37	38	11	12	20	8	9	46	♋14	50	24	♋14	48	57	−1	27
	18	18	22	45	11	14	10	9	6	17	♌12	59	47	♌12	58	14	−1	33
	19	19	10	20	11	15	5	9	18	54	♌26	27	21	♌26	26	3	−1	18
	22	21	22	37	11	17	50	10	24	27	♎ 4	58	51	♎ 4	59	15	+0	24
	30	2	43	6	11	24	16	1	11	58	♑ 0	43	34	♑ 0	43	9	−0	25
Octo.	31	3	31	23	11	25	12	1	23	23	♑13	8	59	♑13	9	10	+0	11
Nov.	4	6	41	27	11	28	53	3	12	16	♓ 5	32	28	♓ 5	31	59	+0	29
	6	8	20	49	0	0	44	4	9	8	♈ 4	16	15	♈ 4	12	35	−3	40
	7	9	14	18	0	1	40	4	23	9	♈19	21	16	♈19	17	13	−4	3
	8	10	11	15	0	2	36	5	7	30	♉ 4	51	23	♉ 4	47	38	−3	45
	12	14	22	40	0	6	21	7	5	34	♋ 7	55	45	♋ 7	54	59	−0	46
	17	18	37	40	0	10	59	9	11	9	♍18	11	40	♍18	9	13	−2	27
Nov.	20	20	48	3	0	13	46	10	15	56	♎25	41	50	♎25	41	22	−0	28
Dec.	1	4	37	31	0	23	4	2	9	35	♓ 0	46	22	♓ 0	47	33	+1	11
	2	5	24	18	0	23	59	2	22	16	♓14	20	1	♓14	21	2	+1	1
	3	6	12	13	0	24	55	3	5	23	♓28	14	27	♓28	15	25	+0	58
	4	7	2	14	0	25	51	3	18	53	♈12	33	45	♈12	33	41	−0	4

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	'	''	S.	°	'	S.	°	'	°	'	''	Q	'	''	'	''
Dec.	6	8	51	56	0	27	44	4	16	57	♉ 12	27	16	♉ 12	25	36	—1	40
	7	9	52	7	0	28	40	5	1	21	♉ 27	56	45	♉ 27	55	17	—1	28
	8	10	54	51	0	29	36	5	15	50	♊ 13	39	29	♊ 13	38	17	—1	12
	12	14	54	16	1	3	22	7	11	58	♌ 14	58	17	♌ 14	58	55	+0	38
	14	16	31	56	1	5	14	8	7	49	♍ 12	52	57	♍ 12	51	17	—1	40
	15	17	17	13	1	6	10	8	20	8	♍ 26	4	48	♍ 26	2	19	—2	29
	16	18	1	20	1	7	6	9	2	7	♎ 8	52	36	♎ 8	49	3	—3	33
	17	18	45	13	1	8	1	9	13	47	♎ 21	21	52	♎ 21	18	10	—3	42
	18	19	29	31	1	8	57	9	25	56	♏ 3	37	50	♏ 3	34	13	—3	37
Dec.	30	4	10	9	1	19	12	2	2	58	♓ 23	53	49	♓ 23	53	44	—0	5

Anno JULIANO MDCCXXXIV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	'	''	S.	°	'	S.	°	'	°	'	''	Q	'	''	'	''
Jan.	1	5	48	48	1	21	4	2	29	30	♈ 22	0	48	♈ 22	1	30	+0	42
	2	6	41	56	1	22	0	3	13	15	♉ 6	29	22	♉ 6	29	56	+0	36
	4	8	37	35	1	23	53	4	11	24	♊ 6	20	2	♊ 6	19	23	—0	39
	5	9	38	40	1	24	49	4	25	36	♊ 21	35	9	♊ 21	34	44	—0	25
	6	10	39	53	1	25	45	5	9	44	♋ 6	56	7	♋ 6	56	20	+0	13
	7	11	39	21	1	26	42	5	23	40	♋ 22	12	26	♋ 22	13	32	+1	6
	11	15	8	42	2	0	26	7	16	17	♍ 20	0	5	♍ 19	59	26	—0	39
	13	16	39	30	2	2	17	8	10	34	♎ 16	11	29	♎ 16	8	29	—3	0
	17	19	42	55	2	6	0	9	26	37	♐ 5	24	42	♐ 5	20	30	—4	12
	19	21	19	58	2	7	51	10	19	20	♑ 0	3	15	♑ 0	0	0	—3	15
Jan.	31	6	30	1	2	18	3	8	3	33	♊ 1	13	3	♊ 1	13	7	+0	4
Feb.	1	7	28	37	2	18	59	3	22	33	♊ 15	57	48	♊ 15	58	30	+0	42
Cent.::	3	9	27	9	2	20	50	4	20	16	♋ 15	36	30	♋ 15	37	54	+1	24
	4	10	22	24	2	21	46	5	3	51	♌ 0	24	0	♌ 0	24	24	+0	24
Cent.	5	11	17	16	2	22	42	5	17	10	♌ 15	1	17	♌ 15	2	17	+1	0
	10	15	16	54	2	27	18	7	19	9	♎ 23	12	26	♎ 23	10	39	—1	47
	11	16	2	42	2	28	13	8	0	49	♏ 5	48	53	♏ 5	45	32	—3	21
	15	19	11	46	3	1	53	9	16	43	♐ 24	52	23	♐ 24	47	57	—4	26
	18	21	37	32	3	4	39	10	21	50	♒ 2	54	38	♒ 2	50	51	—3	47
Feb.	27	4	25	44	3	11	58	2	6	34	♉ 26	49	29	♉ 25	50	40	+1	11
Mart.	1	6	22	26	3	13	49	3	4	28	♊ 26	15	35	♊ 26	15	10	—0	25

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXIV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	H.	D.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Mart.	2	7	21	12	3	14	44	3	18	17	♋10	52	1	♋10	50	52	−1	9
	3	8	15	37	3	15	39	4	1	51	♋25	19	9	♋25	18	10	−0	59
	13	16	16	17	3	24	44	8	2	50	♐ 7	36	18	♐ 7	31	12	−5	6
	15	17	52	14	3	26	32	8	25	41	♑ 2	4	24	♑ 1	59	26	−4	58
	18	20	15	31	3	29	15	10	1	9	♒10	4	36	♒10	0	23	−4	13
Mar.::29		5	16	16	4	8	20	2	16	40	♋ 6	23	35	♋ 6	26	19	+2	44
Apri.	1	7	56	28	4	11	0	3	27	11	♌19	22	5	♌19	21	59	−0	6
	2	8	44	56	4	11	54	4	9	58	♍ 3	6	42	♍ 3	7	1	+0	19
	3	9	31	36	4	12	47	4	22	23	♍16	34	57	♍16	35	25	+0	28
	4	10	17	19	4	13	41	5	4	29	♍29	48	53	♍29	48	42	−0	11
	5	11	2	34	4	14	35	5	16	17	♎12	47	49	♎12	47	19	−0	30
	11	15	46	3	4	19	56	7	24	7	♐27	20	18	♐27	14	21	−5	57
	12	16	43	43	4	20	50	8	5	28	♑ 9	35	59	♑ 9	30	13	−5	46
	13	17	20	55	4	21	43	8	17	1	♑21	59	5	♑21	53	50	−5	15
	14	18	7	42	4	22	36	8	28	48	♒ 4	35	40	♒ 4	29	59	−5	41
	15	18	54	14	4	23	30	9	10	52	♒17	28	47	♒17	23	25	−5	22
	17	20	28	36	4	25	16	10	6	4	♓14	25	46	♓14	21	0	−4	46
	24	2	2	25	5	0	38	0	29	58	♊15	1	48	♊15	5	33	+3	45
	28	5	53	19	5	4	11	2	26	12	♌14	59	24	♌15	1	47	+2	23
	29	6	42	59	5	5	5	3	9	20	♌28	57	32	♌28	59	6	+1	34
Apri.	30	7	30	14	5	5	58	3	22	5	♍12	32	10	♍12	32	50	+0	40
Maii.	3	9	45	37	5	8	37	4	28	6	♎21	24	19	♎21	24	27	+0	8
	4	10	30	58	5	9	30	5	9	31	♏ 3	55	58	♏ 3	55	12	−0	46
Cent.	5	11	18	11	5	10	23	5	20	46	♏16	20	0	♏16	17	56	−2	4
Cent.	6	12	5	12	5	11	16	6	1	53	♏28	37	53	♏28	34	19	−3	34
	12	16	49	14	5	16	33	8	9	29	♒12	37	8	♒12	31	18	−5	50
	13	17	34	50	5	17	26	8	21	30	♒25	28	12	♒15	21	59	−6	13
	24	2	48	24	5	26	16	1	10	10	♋24	10	4	♋24	14	40	+4	36
Maii.	26	4	37	26	5	28	2	2	7	55	♌23	50	36	♌23	55	29	+4	53
Junii.	2	10	1	25	6	4	9	5	2	41	♍24	39	10	♍24	38	44	−0	26
Cent.	4	11	37	38	6	5	55	5	24	48	♐19	4	53	♐19	2	7	−2	46
	10	16	17	43	6	11	10	8	3	8	♓ 4	5	3	♓ 4	0	57	−4	6
	11	17	3	12	6	12	2	8	15	27	♓17	15	22	♓17	10	20	−5	2
	12	17	49	51	6	12	55	8	28	11	♈ 0	43	54	♈ 0	39	8	−4	46

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXIV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	H.	D.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Junii.	25	4	55	4	6	23	28	2	15	12	♍29	44	46	♍29	46	42	+1	56
	30	8	45	34	6	27	50	4	14	21	♐ 2	49	1	♐ 2	50	6	+1	5
Julii.	1	9	33	11	6	28	43	4	25	32	♐15	0	52	♐15	1	8	+0	16
	3	11	9	2	7	0	28	5	17	47	♑ 9	33	2	♑ 9	31	45	—1	17
	7	14	16	43	7	3	58	7	3	28	♓ 0	7	30	♓ 0	3	47	—3	43
	9	15	48	1	7	5	43	7	27	49	♓26	28	17	♓26	25	16	—3	1
	13	19	12	23	7	9	14	9	21	2	♉22	38	50	♉22	33	59	—4	51
	16	22	13	24	7	11	52	11	3	57	♋ 8	24	45	♋ 8	21	12	—3	33
	27	6	41	4	7	20	43	3	13	52	♏28	23	21	♏28	22	40	—0	41
	28	7	28	29	7	21	35	3	25	19	♐10	36	51	♐10	37	16	+0	25
	29	8	16	20	7	22	28	4	6	39	♐22	50	12	♐22	50	24	+0	12
	30	9	4	16	7	23	21	4	17	57	♑ 5	7	9	♑ 5	6	46	—0	23
Julii.	31	9	51	58	7	24	14	4	29	15	♑17	30	50	♑17	29	58	—0	52
Aug.	1	10	39	12	7	25	7	5	10	37	♒ 0	4	25	♒ 0	2	50	—1	35
	6	14	33	48	7	29	32	7	10	26	♈ 5	54	5	♈ 5	51	38	—2	27
	7	15	22	38	8	0	25	7	23	17	♈19	41	26	♈19	39	59	—1	27
	13	21	0	6	8	5	46	10	16	3	♋17	16	55	♋17	12	32	—4	23
	21	2	59	26	8	12	0	1	18	27	♎27	52	40	♎27	51	8	—1	32
	23	4	34	19	8	13	47	2	12	16	♏23	22	15	♏23	21	1	—1	14
	24	5	22	1	8	14	40	2	23	54	♐ 5	45	25	♐ 5	44	28	—0	57
	26	6	57	41	8	16	27	3	16	51	♑ 0	16	15	♑ 0	15	25	—0	50
	29	9	19	17	8	19	7	4	21	22	♒ 7	40	35	♒ 7	39	36	—0	59
	30	10	5	51	8	20	1	5	3	7	♒20	35	29	♒20	33	14	—2	15
Aug.	31	10	52	23	8	20	54	5	15	5	♓ 3	46	33	♓ 3	44	13	—2	20
Sept.	9	18	53	3	8	29	0	9	14	36	♋12	15	30	♋12	12	55	—2	35
	10	19	49	38	8	29	55	9	28	29	♋27	1	10	♋26	57	36	—3	34
	11	20	44	11	9	0	49	10	12	11	♌11	41	54	♌11	38	31	—3	23
	22	4	50	18	9	9	50	2	14	51	♐25	14	10	♐25	12	47	—1	23
	28	9	29	57	9	15	16	4	25	13	♓11	6	59	♓11	5	36	—1	23
	29	10	17	32	9	16	11	5	7	43	♓24	47	42	♓24	45	42	—2	0
Sept.	30	11	7	54	9	17	5	5	20	33	♈ 8	51	42	♈ 8	48	6	—3	36
Octo.	7	17	45	28	9	23	30	8	26	59	♋22	36	15	♋22	34	49	—1	26
	8	18	40	11	9	24	25	9	10	44	♌ 7	11	54	♌ 7	10	0	—1	54

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Octo.	10	20	22	29	9	26	15	10	7	27	♍ 5	43	6	♍ 5	40	18	—2	48
	11	21	10	56	9	27	10	10	20	19	♍19	36	36	♍19	34	20	—2	16
	18	1	55	2	10	2	39	1	1	33	♐ 7	55	54	♐ 7	54	0	—1	54
	22	5	4	23	10	6	19	2	16	45	♑27	3	36	♑27	3	52	+0	16
	25	7	20	16	10	9	5	3	22	2	♓ 4	54	2	♓ 4	54	7	+0	5
	27	8	53	55	10	10	55	4	17	3	♈ 1	48	56	♈ 1	49	3	+0	7
Octo.	30	11	33	20	10	13	41	5	27	20	♉15	38	15	♉15	36	24	—1	51
Nov.	5	17	29	21	10	19	16	8	22	15	♌17	11	58	♌17	8	58	—3	0
	9	20	42	49	10	22	59	10	13	54	♎12	17	6	♎12	14	38	—2	28
	10	21	29	17	10	23	54	10	25	55	♎25	19	23	♎25	17	44	—1	39
	26	9	14	36	11	7	49	4	22	31	♉ 7	32	54	♉ 7	32	49	—0	5
	27	10	12	1	11	8	45	5	6	28	♉22	39	15	♉22	38	32	—0	43
Nov.	28	11	12	56	11	9	42	5	20	45	♊ 8	13	15	♊ 8	11	57	—1	18
Dec.	7	19	27	55	11	18	7	9	24	26	♎21	22	0	♎21	17	0	—5	0
	9	21	1	11	11	19	59	10	18	2	♏16	48	28	♏16	44	15	—4	13
	10	21	48	36	11	20	55	10	29	25	♏29	16	14	♏29	12	26	—3	48
	19	3	55	40	11	28	22	1	28	21	♓ 7	50	25	♓ 7	51	22	+0	57
	20	4	39	36	11	29	17	2	10	11	♓20	31	34	♓20	35	1	+3	27
	22	6	11	42	0	1	9	3	5	0	♈16	52	42	♈16	56	13	+3	31
Dec.	23	7	1	29	0	2	5	3	18	2	♉ 0	41	0	♉ 0	44	7	+3	7

Anno JULIANO MDCCXXXV. Currente.

Janu.	3	17	24	15	0	12	24	8	21	41	♎16	43	33	♎16	37	8	—6	25
	9	22	8	57	0	17	59	11	1	40	♑ 2	8	1	♑ 2	4	8	—3	53
	15	1	54	51	0	22	37	0	27	1	♓ 3	54	19	♓ 3	52	8	—2	11
	17	3	23	20	0	24	28	1	20	21	♓29	23	16	♓29	23	47	+0	31
: :	19	4	56	43	0	26	20	2	15	4	♈25	49	0	♈25	49	56	+0	56
	20	5	46	46	0	27	15	2	28	3	♉ 9	29	10	♉ 9	32	14	+3	4
	21	6	40	13	0	28	11	3	11	26	♉23	37	23	♉23	39	38	+2	15
	22	7	37	0	0	29	7	3	25	13	♊ 8	14	3	♊ 8	14	31	+0	28
: :	25	10	38	20	1	1	55	5	8	8	♋24	26	50	♋24	27	47	+0	51

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXV. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error. Comp.*	
M.	D.	H.	′	″	S	°	′	S.	°	′	°	′	″	°	′	″	′	″
Feb.	14	2	7	44	1	19	28	1	1	13	♈ 8	24	54	♈ 8	23	17	−1	37
	20	7	25	16	1	24	59	3	20	12	♋ 2	32	11	♋ 2	31	3[illegible]	−0	35
Feb.	21	8	24	0	1	25	55	4	4	19	♋ 17	35	42	♋ 17	34	25	−1	17
Mar.	4	17	58	22	2	5	59	8	27	47	♐ 23	1	40	♐ 22	55	40	−6	0
	19	5	20	2	2	18	41	2	18	20	♊ 27	59	31	♊ 27	59	33	+0	2
	21	7	14	24	2	20	30	3	16	13	♋ 27	31	20	♋ 27	30	0	−1	20
Mar.	24	9	55	56	2	23	13	4	27	39	♍ 11	55	35	♍ 11	52	48	−2	47
Apri.	7	21	12	0	3	5	46	10	16	26	♓ 14	48	4	♓ 14	45	57	−2	7
	19	6	59	33	3	15	37	3	12	49	♌ 22	33	17	♌ 22	32	18	−0	59
	22	9	30	44	3	18	17	4	22	56	♎ 5	21	50	♎ 5	20	46	−1	4
	23	10	19	56	3	19	10	5	5	43	♎ 19	13	34	♎ 19	11	42	−1	52
Maii.	3	18	20	43	3	28	1	9	2	46	♒ 26	41	58	♒ 26	39	51	−2	7
	19	7	28	31	4	11	17	3	22	37	♎ 1	5	28	♎ 1	4	28	−1	0
Maii.	20	8	16	58	4	12	10	4	5	32	♎ 14	49	35	♎ 14	48	25	−1	10
Junii.	5	20	52	33	4	26	11	10	14	56	♉ 9	53	55	♉ 9	50	52	−3	3
	14	4	35	30	5	3	15	2	8	18	♍ 12	17	14	♍ 12	16	15	−0	59
	15	5	25	56	5	4	7	2	21	59	♍ 26	40	8	♍ 26	41	2	+0	54
	16	6	15	10	5	5	0	3	5	17	♎ 10	39	26	♎ 10	39	50	+0	24
Junii.	23	11	56	0	5	11	7	5	28	38	♑ 10	56	53	♑ 10	55	10	−1	43
Julii.	12	3	18	0	5	26	56	1	20	6	♍ 20	49	42	♍ 20	51	24	+1	42
	15	5	49	0	5	29	34	3	0	11	♏ 3	13	25	♏ 3	13	10	−0	15
	17	7	26	45	6	1	20	3	24	52	♏ 29	23	13	♏ 29	23	55	+0	42
Julii.	18	8	15	32	6	2	12	4	6	40	♐ 12	3	56	♐ 12	5	28	+1	32
Aug.	2	20	11	48	6	15	25	10	4	44	♊ 25	9	43	♊ 25	2	38	−7	5
	3	21	11	44	6	16	18	10	18	57	♋ 10	24	53	♋ 10	17	43	−7	10
Aug.	10	2	49	57	6	21	38	1	14	50	♎ 13	21	54	♎ 13	20	47	−1	7
Sept.	9	3	11	56	7	17	32	1	21	19	♏ 18	54	6	♏ 18	52	36	−1	30
	10	4	3	5	7	18	26	2	3	53	♐ 2	21	40	♐ 2	20	17	−1	23
	12	5	42	57	7	20	14	2	28	2	♐ 28	9	31	♐ 28	8	56	−0	35
	13	6	31	9	7	21	8	3	9	42	♑ 10	38	25	♑ 10	39	0	+0	35
	17	9	32	30	7	24	44	4	25	1	♒ 29	46	5	♒ 29	48	20	+2	15
	18	10	16	12	7	25	38	5	6	19	♓ 12	11	35	♓ 12	13	30	+1	55
	20	11	45	55	7	27	26	5	29	19	♈ 7	35	37	♈ 7	35	51	+0	14

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ

Anno JULIANO MDCCXXXV.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error. Comp.*	
M.	H.	D.	′	″	S.	°	′	S	°	′	°	′	″	°	′	″	′	″
Octob.	8	2	42	45	8	12	55	1	13	18	♐ 9	32	6	♐ 9	30	6	−2	0
	12	5	58	56	8	16	35	3	0	26	♒ 0	18	34	♒ 0	19	45	+1	11
	15	8	10	38	8	19	19	4	4	38	♓ 7	6	22	♓ 7	8	2	+1	40
	16	8	54	15	8	20	14	4	16	9	♓ 19	35	18	♓ 19	36	35	+1	17
	18	10	24	18	8	22	4	5	9	40	♈ 15	18	30	♈ 15	18	15	−0	15
	28	19	24	57	9	1	18	9	22	15	♍ 8	28	22	♍ 8	24	0	−4	22
Octob.	29	20	16	24	9	2	13	10	5	56	♍ 23	1	58	♍ 22	57	3	−4	55
Nov.	10	5	21	10	9	12	23	2	20	25	♒ 19	40	49	♒ 19	42	36	+1	47
	11	6	4	40	9	13	19	3	1	49	♓ 1	53	50	♓ 1	55	4	+1	14
	12	6	47	42	9	14	14	3	13	18	♓ 14	9	44	♓ 14	11	46	+2	2
	14	8	15	32	9	16	5	4	6	46	♈ 9	21	29	♈ 9	21	48	+0	19
	17	10	42	40	9	18	52	5	13	59	♉ 19	53	45	♉ 19	51	53	−1	52
Nov.	28	20	44	5	9	29	8	10	13	37	♏ 0	55	50	♏ 0	51	21	−4	29
Dec.	11	6	8	19	10	10	19	3	3	17	♈ 3	43	31	♈ 3	46	30	+2	59
	12	6	52	39	10	11	15	3	15	10	♈ 16	22	23	♈ 16	25	0	+2	37
	13	7	39	7	10	12	10	3	27	22	♈ 29	23	47	♈ 29	25	40	+1	53
	14	8	28	30	10	13	6	4	9	55	♉ 12	53	21	♉ 12	54	4	+0	43
	15	9	21	18	10	14	3	4	22	52	♉ 26	55	5	♉ 26	54	18	−0	47

Anno JULIANO MDCCXXXVI. Currente.

Jan.	5	2	39	50	11	2	44	1	8	7	♓ 4	41	24	♓ 4	41	0	−0	24
::	11	7	8	2	11	8	18	3	18	33	♉ 20	11	52	♉ 20	13	54	+2	2
	13	8	57	9	11	10	10	4	14	58	♊ 18	34	42	♊ 18	33	24	−1	18
	14	9	56	8	11	11	7	4	28	48	♋ 3	36	21	♋ 3	34	33	−1	48
Feb.	11	8	37	30	0	6	8	4	8	7	♋ 11	8	46	♋ 11	8	0	−0	46
	12	9	36	40	0	7	3	4	22	16	♋ 26	25	49	♋ 26	23	35	−2	14
Mart.	5	2	59	27	0	26	17	1	14	12	♉ 11	2	23	♉ 11	0	23	−2	0
	8	5	31	53	0	29	1	2	21	38	♊ 21	10	41	♊ 21	9	40	−1	1
	10	7	23	20	1	0	51	3	18	36	♋ 19	49	8	♋ 19	46	48	−2	20
	11	8	20	18	1	1	45	4	2	37	♌ 4	44	20	♌ 4	41	11	−3	9
	12	9	17	7	1	2	40	4	16	52	♌ 19	58	53	♌ 19	56	5	−2	48
	13	10	13	27	1	3	35	5	1	16	♍ 5	27	50	♍ 5	25	54	−1	56
	15	12	0	0	1	5	24	6	0	0	♎ 6	36	34	♎ 6	36	12	−0	22

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXVI. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error. Comp.*	
M.	D.	H.	′	″	S	°	′	S.	°	′	°	′	″	°	′	″	′	″
Apri.	4	3	28	19	1	22	30	1	20	35	♊17	0	16	♊16	57	32	−2	44
	5	4	22	30	1	23	24	2	3	33	♋ 0	54	50	♋ 0	52	38	−2	12
	7	6	13	5	1	25	12	3	0	25	♋29	31	50	♋29	28	45	−3	5
	8	7	8	12	1	26	6	3	14	22	♌14	12	16	♌14	8	18	−3	58
	10	8	56	41	1	27	53	4	12	35	♍14	6	57	♍14	2	50	−4	7
	11	9	50	24	1	28	47	4	26	43	♍29	15	0	♍29	11	10	−3	50
	23	19	57	30	2	9	28	9	27	19	♓11	57	42	♓11	56	11	−1	31
	24	20	40	10	2	10	21	10	8	40	♓24	10	42	♓24	9	45	−0	57
	25	21	23	16	2	11	14	10	20	6	♈ 6	32	30	♈ 6	31	34	−0	56
Maii.	4	4	9	16	2	18	20	1	29	38	♋25	10	52	♋25	10	15	−0	37
	7	6	52	25	2	20	59	3	11	12	♍ 9	2	50	♍ 9	1	58	−0	52
	9	8	35	33	2	22	45	4	9	2	♎ 8	27	56	♎ 8	25	14	−2	42
	10	9	27	50	2	23	38	4	22	45	♎23	7	33	♎23	5	35	−1	58
	11	10	20	48	2	24	31	5	6	15	♏ 7	42	20	♏ 7	40	55	−1	25
Maii.	23	20	1	15	3	5	5	10	0	31	♈13	49	51	♈13	48	25	−1	26
Junii.	1	2	59	13	3	12	7	1	12	36	♌ 4	58	27	♌ 4	59	10	+0	43
	8	9	7	21	3	18	16	4	18	52	♏16	52	53	♏16	52	8	−0	45
	9	10	0	6	3	19	9	5	1	47	♐ 0	52	40	♐ 0	52	31	−0	9
	22	20	12	16	4	0	31	10	4	56	♉16	48	13	♉16	44	20	−3	53
Junii.	24	21	56	40	4	2	17	11	0	19	♊14	15	54	♊14	12	0	−3	54
Julii.	9	10	31	56	4	14	36	5	8	56	♑ 6	49	27	♑ 6	51	17	+1	50
	21	19	43	27	4	25	7	9	28	2	♊ 7	42	27	♊ 7	36	53	−5	34
	22	20	37	34	4	26	0	10	11	3	♊21	40	45	♊21	34	27	−6	18
	30	3	14	25	5	2	12	1	19	59	♎ 8	32	38	♎ 8	35	20	+2	42
Julii.	31	4	7	45	5	3	5	2	4	7	♎23	29	26	♎23	32	17	+2	51
Aug. ::	1	5	0	25	5	3	58	2	17	54	♏ 8	1	30	♏ 8	6	0	+4	30
	3	6	45	18	5	5	45	3	14	22	♐ 6	2	32	♐ 6	5	35	+3	3
	4	7	38	29	5	6	38	3	27	1	♐19	33	52	♐19	35	47	+1	55
	8	10	54	7	5	10	10	5	14	5	♒10	54	57	♒10	57	58	+3	1
	21	21	13	20	5	21	42	10	18	56	♋28	38	20	♋28	30	55	−7	25
Aug.	31	5	32	25	5	29	47	2	25	55	♐15	2	12	♐15	4	54	+2	42
Sept.	2	7	15	29	6	1	34	3	20	50	♑11	36	48	♑11	40	6	+3	18
	29	5	9	8	6	25	4	2	18	54	♑ 6	46	38	♑ 6	47	54	+1	16

LUNA MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ

Anno JULIANO MDCCXXXVI.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia* ☾ *à* ☉			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error. Comp.*	
M.	H.	D:	′	″	S.	°	′	S	°	′	°	′	″	°	′	″	′	″
Octob.	1	6	48	28	6	26	53	3	13	10	♒ 2	41	12	♒ 2	42	29	+1	17
	3	8	19	24	6	28	42	4	6	12	♒27	25	52	♒27	28	18	+2	26
	4	9	2	40	6	29	36	4	17	24	♓ 9	35	28	♓ 9	38	20	+2	52
	6	10	27	39	7	1	25	5	9	31	♈ 3	54	11	♈ 3	54	58	+0	47
	7	11	12	29	7	2	20	5	20	36	♈16	10	32	♈16	10	10	—0	22
Octob.	19	21	24	0	7	13	20	10	22	49	♎ 0	32	57	♎ 0	28	32	—4	25
Nov.	1	7	42	8	7	24	25	3	26	57	♓17	14	22	♓17	14	42	+0	20
	2	8	24	24	7	25	20	4	8	11	♓29	21	56	♓29	22	36	+0	40
Nov.	29	6	20	2	8	19	30	3	5	29	♓24	28	32	♓24	27	20	—1	12
Dec.	24	2	46	36	9	11	55	1	9	26	♒24	34	6	♒24	33	4	—1	2
	26	4	14	52	9	13	46	2	2	19	♓19	22	36	♓19	21	24	—1	12

Anno JULIANO MDCCXXXVII. Currente.

Jan.	3	10	27	8	9	21	13	5	6	48	♋ 1	22	40	♋ 1	20	13	—2	27
	25	4	17	28	10	10	46	2	3	32	♈20	58	5	♈20	56	0	—2	5
	27	5	44	57	10	12	37	2	26	27	♉15	30	33	♉15	30	45	+0	12
: :	28	6	31	36	10	13	32	3	8	14	♉28	7	50	♉28	8	25	+0	35
	30	8	12	17	10	15	23	4	2	49	♊24	30	55	♊24	31	8	+0	13
Feb.	25	5	13	1	11	8	24	2	17	26	♊ 5	53	7	♊ 5	51	50	—1	17
	26	6	2	13	11	9	19	2	29	30	♊18	46	10	♊18	46	13	+0	3
	27	6	53	44	11	10	14	3	11	57	♋ 2	3	10	♋ 2	3	18	+0	8
Feb.	28	7	47	15	11	11	9	3	24	49	♋15	47	46	♋15	47	4	—0	42
Mart.	29	7	24	55	0	6	32	3	18	18	♌ 8	1	9	♌ 8	0	49	—0	20
	30	8	19	6	0	7	26	4	1	57	♌22	29	50	♌22	28	42	—1	8
Apri.	2	11	4	10	0	10	8	5	14	48	♎ 8	24	49	♎ 8	25	33	+0	44
	26	6	11	24	1	0	39	2	29	49	♌17	1	43	♌17	1	8	—0	35
Apri.	27	7	3	48	1	1	33	3	13	22	♍ 1	16	28	♍ 1	16	30	+0	2
Maii.	22	3	16	4	1	22	44	1	16	22	♋29	0	18	♋29	0	11	—0	7
	23	4	8	21	1	23	37	1	29	14	♌12	45	30	♌12	46	50	+1	20
	24	5	0	19	1	24	30	2	12	27	♌26	46	3	♌26	46	25	+0	22
Maii	27	7	35	15	1	27	8	3	23	47	♎10	12	50	♎10	12	15	—0	35
Junii	22	4	40	56	2	19	5	2	9	15	♍21	7	32	♍21	9	42	+2	10

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno Juliano MDCCXXXVII. Currente.

Tranſitûs Limbi Lunæ T. æq.					Argument. Annuum.			Diſtantia ☾ à ☉			Longitudo Centri Lunæ Obſervata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	H.	D.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Julii.	10	19	40	8	3	4	52	9	27	3	♉ 25	57	0	♉ 25	54	18	−2	42
	12	21	17	35	3	6	37	10	20	47	♊ 21	38	14	♊ 21	36	50	−1	24
	13	22	9	42	3	7	30	11	3	0	♋ 5	0	44	♋ 4	58	25	−2	19
	24	7	1	16	3	16	20	3	18	8	♏ 29	59	42	♐ 0	1	22	+1	40
Julii.	26	8	52	20	3	18	6	4	15	4	♐ 28	49	2	♐ 28	49	14	+0	12
Aug.	19	4	2	14	4	8	28	2	3	10	♏ 10	38	1	♏ 10	42	31	+4	30
Sept.	19	5	38	32	5	5	24	2	26	29	♑ 4	10	9	♑ 4	11	6	+0	57
	20	6	33	6	5	6	19	3	9	39	♑ 18	6	3	♑ 18	7	14	+1	11
Sept.	21	7	25	29	5	7	13	3	22	23	♒ 1	37	27	♒ 1	39	10	+1	43
Nov.	13	2	9	41	6	24	2	1	2	49	♑ 5	55	20	♑ 5	52	57	−2	23
	16	4	55	0	6	26	50	2	12	35	♒ 18	37	25	♒ 18	33	32	−3	53
	17	5	43	20	6	27	46	2	24	59	♓ 1	47	5	♓ 1	43	32	−3	33
	18	6	28	56	6	28	41	3	7	1	♓ 14	32	38	♓ 14	30	0	−2	38
	19	7	12	38	6	29	37	3	18	43	♓ 27	2	27	♓ 26	59	11	−3	16
	21	8	37	25	7	1	28	4	11	24	♈ 21	31	57	♈ 21	29	22	−2	35
	22	9	20	1	7	2	24	4	22	31	♉ 3	42	46	♉ 3	40	28	−2	18
Anno Juliano MDCCXXXVIII. Currente.																		
Janu.	14	4	28	25	8	19	59	2	5	40	♈ 11	38	39	♈ 11	37	41	−0	58
Feb.	11	3	5	10	9	15	0	1	14	21	♈ 18	45	47	♈ 18	42	7	−3	40
	17	7	37	52	9	20	30	3	23	13	♋ 2	57	25	♋ 2	59	3	+1	38
	18	8	28	10	9	21	25	4	5	12	♋ 15	50	53	♋ 15	52	24	+1	31
Feb.	20	10	12	7	9	23	15	5	0	0	♌ 12	43	50	♌ 12	44	22	+0	32
Mar.	12	2	26	40	10	10	37	1	5	17	♉ 8	32	41	♉ 8	31	18	−1	23
Mar.	15	4	41	58	10	13	19	2	9	5	♊ 15	20	6	♊ 15	21	28	+1	22
Aprii.	14	5	1	35	11	9	24	2	12	27	♋ 18	4	58	♋ 18	5	51	+0	53
	15	5	51	2	11	10	17	2	24	26	♌ 0	48	58	♌ 0	50	33	+1	35
	17	7	31	0	11	12	4	3	19	29	♌ 27	19	54	♌ 27	21	13	+1	19
Aprii.	19	9	12	50	11	13	51	4	16	11	♍ 25	44	27	♍ 25	44	54	+0	27
Maii.	15	6	14	2	0	6	0	3	0	34	♍ 5	39	50	♍ 5	39	55	+0	5
	16	7	3	15	0	6	52	3	13	39	♍ 19	27	43	♍ 19	27	20	−0	23
	18	8	45	7	0	8	38	4	11	4	♎ 18	33	57	♎ 18	31	42	−2	15
	19	9	39	9	0	9	31	4	25	18	♏ 3	51	30	♏ 3	49	30	−2	0
	20	10	36	7	0	10	24	5	9	48	♏ 19	34	34	♏ 19	31	37	−2	57

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXVIII. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*			*Longitudo Centri Lunæ Comput.*			*Error Comp.*	
M.	D.	H.	′	″	S.	°	′	S.	°	′	°	′	″	°	′	″	′	″
Junii.	11	4	11	14	0	28	51	2	0	3	♍ 1	19	40	♍ 1	21	1	+1	21
Cent.	14	6	38	21	1	1	28	3	9	10	♎ 12	42	47	♎ 12	41	35	−1	12
	15	7	28	20	1	2	21	3	22	57	♎ 27	18	40	♎ 27	15	48	−2	52
	18	10	18	9	1	5	0	5	5	51	♐ 13	23	19	♐ 13	17	34	−5	45
Julii.	15	8	5	13	1	27	49	4	3	46	♐ 6	49	22	♐ 6	45	54	−3	28
	16	9	4	5	1	28	42	4	17	59	♐ 22	2	25	♐ 21	58	20	−4	5
	17	10	4	31	1	29	35	5	2	9	♑ 7	19	0	♑ 7	14	36	−4	24
Julii.	30	20	46	40	2	11	2	10	13	3	♋ 0	55	50	♋ 0	56	31	+0	41
Aug.	11	5	59	18	2	20	46	3	2	41	♐ 1	56	44	♐ 1	57	27	+0	43
Sept.	11	7	44	20	3	17	36	3	27	4	♑ 26	12	32	♑ 26	11	39	−0	53
	12	8	39	43	3	18	30	4	10	26	♒ 10	27	10	♒ 10	26	7	−1	3
Sept.	13	9	32	41	3	19	25	4	23	30	♒ 24	29	0	♒ 24	28	6	−0	54
Octo.	8	5	40	0	4	11	12	2	25	35	♑ 21	51	18	♑ 21	53	6	+1	48
Octo.	11	8	20	0	4	13	57	4	5	16	♓ 3	52	26	♓ 3	52	3	−0	23
Nov.	5	4	29	57	5	6	3	2	6	37	♒ 1	19	33	♒ 1	16	42	−2	51
	6	5	25	42	5	6	59	2	20	17	♒ 15	44	57	♒ 15	41	55	−3	2
	8	7	6	45	5	8	50	3	16	21	♓ 13	16	46	♓ 13	14	2	−2	44
Nov.	10	8	37	44	5	10	41	4	10	45	♈ 9	27	12	♈ 9	27	5	−0	7
Dec.	8	7	20	36	6	5	49	3	20	51	♈ 18	10	47	♈ 18	9	9	−1	38
*	12	5	27	6	6	9	22	5	4	6	♊ 5	28	48	♊ 5	30	5	+1	17

Anno JULIANO MDCCXXXIX. Currente.

Feb.	2	4	38	49	7	26	7	2	8	39	♉ 3	39	5	♉ 3	29	45	+0	40
	3	5	23	54	7	27	3	2	20	33	♉ 16	25	30	♉ 16	26	2	+0	32
	4	6	9	14	7	27	58	3	2	12	♉ 28	56	8	♉ 28	56	18	+0	10
Feb.	6	7	42	6	7	29	48	3	25	3	♊ 23	28	33	♊ 23	29	28	+0	55
Mart.	5	5	34	54	8	23	40	2	22	30	♊ 18	27	25	♊ 18	29	30	+2	5
	7	7	10	40	8	25	29	3	15	24	♋ 12	55	36	♋ 12	57	47	+2	11
	8	7	59	4	8	26	24	3	26	53	♋ 25	13	13	♋ 25	15	38	+2	25
	9	8	47	28	8	27	18	4	8	28	♌ 7	40	43	♌ 7	43	13	+2	30
	10	9	35	38	8	28	13	4	20	12	♌ 20	23	55	♌ 20	25	6	+1	11

LUNÆ MERIDIANÆ LONGITUDINES GRENOVICI OBSERVATÆ CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXIX. Currente.

Tranſitûs Limbi Lunæ T. æq.					*Argument. Annuum.*			*Diſtantia ☾ à ☉*			*Longitudo Centri Lunæ Obſervata.*				*Longitudo Centri Lunæ Comput.*				*Error Comp.*		
M.	D.	H.	′	″	s	°	′	s	°	′		°	′	″		°	′	″		′	″
Apri.	3	5	3	14	9	18	59	2	13	15	♋	7	55	32	♋	7	55	47	+	0	15
	7	8	14	32	9	22	34	3	29	51	♌	27	33	30	♌	27	34	34	+	1	4
	8	9	1	42	9	23	28	4	12	0	♍	10	37	0	♍	10	37	42	+	0	42
Apri.	30	2	56	57	10	12	10	1	12	8	♋	3	12	20	♋	3	10	19	—	2	1
Maii	1	3	45	10	10	13	3	1	23	24	♋	15	23	32	♋	15	22	45	—	0	47
	4	6	7	20	10	15	42	2	27	54	♌	22	12	20	♌	22	14	2	+	1	42
	6	7	39	51	10	17	28	3	22	4	♍	17	54	7	♍	17	54	23	+	0	16
	7	8	26	33	10	18	21	4	4	39	♎	1	22	13	♎	1	21	21	—	0	52
	9	10	5	48	10	20	7	5	0	58	♎	29	49	15	♎	29	47	35	—	1	40
	21	21	2	59	11	0	43	10	15	12	♈	25	54	0	♈	25	51	50	—	2	10
Junii	3	6	19	30	11	11	15	3	2	45	♍	25	41	36	♍	25	40	0	—	1	36
	29	3	32	59	0	3	11	1	20	17	♍	8	30	0	♍	8	28	46	—	1	14
	30	4	16	26	0	4	3	2	2	4	♍	21	8	37	♍	21	9	16	+	0	39
Julii	1	5	1	10	0	4	55	2	14	12	♎	4	9	8	♎	4	7	22	—	1	46
	2	5	46	40	0	5	48	2	26	43	♎	17	28	18	♎	17	26	8	—	2	10
	4	7	25	20	0	7	33	3	23	3	♏	15	27	2	♏	15	23	30	—	3	32
	5	8	18	8	0	8	26	4	6	51	♐	0	8	52	♐	0	5	28	—	3	24
	6	9	16	10	0	9	19	4	21	2	♐	15	21	38	♐	15	16	54	—	4	44
Octo.	27	5	38	5	3	17	9	2	23	32	♒	8	30	54	♒	8	30	58	+	0	4
: :	28	6	33	58	3	18	5	3	7	23	♒	23	6	17	♒	23	5	37	—	0	40
: :	29	7	27	4	3	19	0	3	21	3	♓	7	33	10	♓	7	31	7	—	2	3
Dec.	26	6	36	30	5	11	8	3	9	12	♈	24	54	50	♈	24	53	37	—	1	13
	27	7	22	49	5	12	3	3	21	45	♉	8	18	37	♉	8	18	44	+	0	7

FINIS.